

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5 CHICAGO REGIONAL LABORATORY 536 SOUTH CLARK STREET CHICAGO, ILLINOIS 60605

Date: 5/29/2018

Subject: Review of Region 5 Data for Central Sands

To: Water Division, WECA Region 5

77 West Jackson Boulevard

Chicago, IL 60604

From: Amanda Wroble, Chemist

US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Central Sands

Emanda Wuble

Analyses included in this report:

Metals ICP-AES (w)



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5Project:Central Sands77 West Jackson BoulevardProject Number:CB022018Reported:Chicago IL, 60604Project Manager:Cheryl BurdettMay-29-18 10:55

Accredited Analyses included in this Report



Method: EPA 200.7 in Water Analysis: Metals ICP-AES (w)

Analyte	Certifications
Aluminum	ISO/IEC 17025:2005
Aluminum hi	ISO/IEC 17025:2005
Antimony	ISO/IEC 17025:2005
Arsenic	ISO/IEC 17025:2005
Barium	ISO/IEC 17025:2005
Beryllium	ISO/IEC 17025:2005
Boron	ISO/IEC 17025:2005
Cadmium	ISO/IEC 17025:2005
Calcium	ISO/IEC 17025:2005
Chromium	ISO/IEC 17025:2005
Cobalt	ISO/IEC 17025:2005
Copper	ISO/IEC 17025:2005
Iron	ISO/IEC 17025:2005
Iron hi	ISO/IEC 17025:2005
Lead	ISO/IEC 17025:2005
Lithium	ISO/IEC 17025:2005
Magnesium	ISO/IEC 17025:2005
Magnesium hi	ISO/IEC 17025:2005
Manganese	ISO/IEC 17025:2005
Molybdenum	ISO/IEC 17025:2005
Nickel	ISO/IEC 17025:2005
Potassium	ISO/IEC 17025:2005
Selenium	ISO/IEC 17025:2005
Silver	ISO/IEC 17025:2005
Sodium	ISO/IEC 17025:2005
Strontium	ISO/IEC 17025:2005



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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Accredited Analyses included in this Report



Method: EPA 200.7 in Water Analysis: Metals ICP-AES (w)

 Analyte
 Certifications

 Thallium
 ISO/IEC 17025:2005

 Tin
 ISO/IEC 17025:2005

 Titanium
 ISO/IEC 17025:2005

 Vanadium
 ISO/IEC 17025:2005

 Zinc
 ISO/IEC 17025:2005

Analytes not listed above are not accredited by ANAB.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 77 West Jackson Boulevard Chicago IL, 60604 Project Number: CB022018
Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

ANALYSIS CASE NARRATIVE

GENERAL INFORMATION

CRL received water samples for trace metals analysis by inductively coupled plasma-atomic emission spectroscopy (ICP-AES). The assigned work order(s) and sample numbers to which this narrative applies are listed below:

Work Order (number of samples)

Batch Number

1805005 (54)

B18E013, B18E014, B18E015

The designated analyst for these samples, Amanda Wroble, can be reached at 312.353.0375. All holding times were met.

Many of samples arrived at CRL underpreserved. Therefore, 1:1 nitric acid was added to each affected sample to pH < 2. At least 24 hours elapsed before subsampling began. Per pen & ink – 14097, the samples were not homogenized before subsampling. The samples were digested using CRL SOP METALS025, Rev. 3 (EPA Method 200.2) and analyzed using CRL SOP METALS003A, Rev. 4 (EPA Method 200.7/SW-846 Method 6010D).

SAMPLE ANALYSIS AND RESULTS

The data reported herein meet the requirements referenced in the SOP used for analysis and any laboratory specifications stated in the *Quality Assurance Project Plan/Sampling Plan for Environmental Compliance Assessment for Central Sands.* dated April 2018.

Calcium and nickel results were reported over two analytical runs due to quality control audit failures within each run.

QUALITY CONTROL

All quality control audits that bracketed samples to which this narrative applies and the run in which a specific sample/analyte was reported were within CRL limits for the requested analytes or did not result in qualification of the data.



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Water Division, WECA Region 5 77 West Jackson Boulevard Chicago IL, 60604 Project Number: CB022018
Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

<u>Laboratory Control Solution Measured (HiLCM)</u>: Recovery Limit = $100 \pm 10\%$. Run 1 calcium HiLCM #6 was outside the audit limit with a recovery of 89.4%. Bracketing calcium results that were reported from Run 1 (1805005-34 thru -36) were flagged "L" for potential low bias.

<u>Laboratory Duplicate (DUP):</u> Relative Percent Difference (RPD) Limit $\leq 20\%$. Titanium RPDs for B18E013-DUP1 (26.2%) and B18E013-DUP2 (24.8%) were outside the duplicate RPD limit. The titanium results for their source samples 1805005-05 and 1805005-11 were flagged "J" for imprecision.

<u>Matrix Spike (MS)</u>: Recovery Limit = $100 \pm 25\%$. Titanium recovery for B18E014-MS1 (128%) and copper recovery for B18E015-MS1 (129%) were outside the matrix spike audit limit. The copper result for source sample 1805005-41 was flagged "K" for potential high bias.

The titanium result for source sample 1805005-21 was flagged "J" for imprecision based on an elevated but acceptable RPD for B18E014-DUP1 (20.0%) in addition to the high matrix spike recovery. A similar trend (RPD failure and elevated but acceptable matrix spike recovery) is noted for the titanium duplicate excursions mentioned above.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager: Angela Ockrassa Davis

Project: Central Sands Project Number: [none]

Report To:

Cheryl Burdett Water Division, WECA Region 5 77 West Jackson Boulevard Chicago, IL 60604 Phone: (312) 886-1463 Fax: (312) 886-2001

Printed: 5/3/2018 3:33:25PM

Date Due: Jun-04-18 15:00 (32 day TAT)

Received By: Colin Breslin
Logged In By: Robert Snyder

Date Received: May-02-18 09:55

Date Logged In: May-03-18 09:30

Samples Received at: Sample tags/labels

Yes

Work Order Comments:
Anions: Chloride and nitrate as NO3

Seals Intact Yes
Received on ice Yes

Paperwork Included Yes

Full List metals

Sample ID: <u>1805005-01</u> Sampled: <u>Apr-30-18 07:19</u> Matrix: <u>Water</u>

Sample Name: A1a Sample Location/Comments: 1st Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 07:19	pH = 2
Anions by IC	28	May-28-18 07:19	pH = 7
Metals ICP-AES (w)	180	Oct-27-18 07:19	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 07:19	pH = 2
Solids, TDS	7	May-07-18 07:19	pH = 7
TKN DA	28	May-28-18 07:19	pH = 2
TOC	28	May-28-18 07:19	pH = 2
Total Phosphorus DA	28	May-28-18 07:19	pH = 2

Sample ID: <u>1805005-02</u> Sampled: <u>Apr-30-18 07:32</u> Matrix: <u>Water</u>

Sample Name: A1b Sample Location/Comments: 1st Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 07:32	pH = 2	
Anions by IC	28	May-28-18 07:32	pH = 5	
Metals ICP-AES (w)	180	Oct-27-18 07:32	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 07:32	pH = 2	

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1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5

Project: Central Sands

Project Manager:

Angela Ockrassa Davis

Project Number: [none]

Sample ID: <u>1805005-02</u> Sampled: <u>Apr-30-18 07:32</u> Matrix: <u>Water</u>

Sample Name: A1b Sample Location/Comments: 1st Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Solids, TDS	7	May-07-18 07:32	pH = 5	
TKN DA	28	May-28-18 07:32	pH = 2	
TOC	28	May-28-18 07:32	pH = 2	
Total Phosphorus DA	28	May-28-18 07:32	pH = 2	

Sample ID: 1805005-03 Sampled: <u>Apr-30-18 08:15</u> Matrix: <u>Water</u>

Sample Name: A2a Sample Location/Comments: 22nd Avenue North

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 08:15	pH = 2	
Anions by IC	28	May-28-18 08:15	pH = 6	
Metals ICP-AES (w)	180	Oct-27-18 08:15	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 08:15	pH = 2	
Solids, TDS	7	May-07-18 08:15	pH = 6	
TKN DA	28	May-28-18 08:15	pH = 2	
TOC	28	May-28-18 08:15	pH = 2	
Total Phosphorus DA	28	May-28-18 08:15	pH = 2	

Sample ID: <u>1805005-04</u> Sampled: <u>Apr-30-18 08:24</u> Matrix: <u>Water</u>

Sample Name: A2b Sample Location/Comments: 22nd Avenue North

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 08:24	pH = 2
Anions by IC	28	May-28-18 08:24	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 08:24	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 08:24	pH = 2
Solids, TDS	7	May-07-18 08:24	pH = 6
TKN DA	28	May-28-18 08:24	pH = 2
TOC	28	May-28-18 08:24	pH = 2
Total Phosphorus DA	28	May-28-18 08:24	pH = 2

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5

Project: Central Sands

Project Manager: Angela Ockrassa Davis

Project Number: [none]

Sample ID: 1805005-05 Sampled: Apr-30-18 09:06 Matrix: Water OC Source Sample MS/MSD

Sample Name: A3a Sample Location/Comments: 2nd Street

Sample Comments: MS/MSD

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:06	pH = 2
Anions by IC	28	May-28-18 09:06	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 09:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:06	pH = 2
Solids, TDS	7	May-07-18 09:06	pH = 6
TKN DA	28	May-28-18 09:06	pH = 2
TOC	28	May-28-18 09:06	pH = 2
Total Phosphorus DA	28	May-28-18 09:06	pH = 2

Sample ID: <u>1805005-06</u> Sampled: <u>Apr-30-18 09:14</u> Matrix: <u>Water</u>

Sample Name: A3b Sample Location/Comments: 2nd Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	******************
Ammonia N DA, Distilled	28	May-28-18 09:14	pH = 2	
Anions by IC	28	May-28-18 09:14	pH = 6	
Metals ICP-AES (w)	180	Oct-27-18 09:14	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:14	pH = 2	
Solids, TDS	7	May-07-18 09:14	pH = 6	
TKN DA	28	May-28-18 09:14	pH = 2	
TOC	28	May-28-18 09:14	pH = 2	
Total Phosphorus DA	28	May-28-18 09:14	pH = 2	

Sample ID: <u>1805005-07</u> Sampled: <u>Apr-30-18 09:38</u> Matrix: <u>Water</u>

Sample Name: A4 Equip Sample Location/Comments: Cranberry Rock Road

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 09:38	pH = 2	
Anions by IC	28	May-28-18 09:38	pH = 5	
Metals ICP-AES (w)	180	Oct-27-18 09:38	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:38	pH = 2	
Solids, TDS	7	May-07-18 09:38	pH = 5	
TKN DA	28	May-28-18 09:38	pH = 2	
TOC	28	May-28-18 09:38	pH = 2	

WORK ORDER

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5

Project: Central Sands

Project Manager:

Angela Ockrassa Davis

Printed: 5/3/2018 3:33:25PM

Project Number: [none]

Sample ID: <u>1805005-07</u> Sampled: <u>Apr-30-18 09:38</u> Matrix: <u>Water</u>

Sample Name: A4 Equip Sample Location/Comments: Cranberry Rock Road

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-28-18 09:38	pH = 2

Sample ID: <u>1805005-08</u> Sampled: <u>Apr-30-18 09:06</u> Matrix: <u>Water</u>

Sample Name: A3a (Dup) Sample Location/Comments: 2nd Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:06	pH = 2
Anions by IC	28	May-28-18 09:06	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 09:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:06	pH = 2
Solids, TDS	7	May-07-18 09:06	pH = 6
TKN DA	28	May-28-18 09:06	pH = 2
TOC	28	May-28-18 09:06	pH = 2
Total Phosphorus DA	28	May-28-18 09:06	pH = 2

Sample ID: 1805005-09 Sampled: <u>Apr-30-18 09:49</u> Matrix: <u>Water</u>

Sample Name: FB1 Sample Location/Comments: Cranberry Rock Road

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:49	pH = 2
Anions by IC	28	May-28-18 09:49	pH = 4
Metals ICP-AES (w)	180	Oct-27-18 09:49	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:49	pH = 2
Solids, TDS	7	May-07-18 09:49	pH = 4
TKN DA	28	May-28-18 09:49	pH = 2
TOC	28	May-28-18 09:49	pH = 2
Total Phosphorus DA	28	May-28-18 09:49	pH = 2

Sample ID: <u>1805005-10</u> Sampled: <u>Apr-30-18 09:58</u> Matrix: <u>Water</u>

Sample Name: <u>A4a</u> Sample Location/Comments: <u>Cranberry Rock Road</u>

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 09:58	pH = 2	
Anions by IC	28	May-28-18 09:58	pH = 6	

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5

Project Manager:

Angela Ockrassa Davis

Project: Central Sands

Project Number:

none

Sample ID: <u>1805005-10</u> Sampled: <u>Apr-30-18 09:58</u> Matrix: <u>Water</u>

Sample Name: A4a Sample Location/Comments: Cranberry Rock Road

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Metals ICP-AES (w)	180	Oct-27-18 09:58	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:58	pH = 2	
Solids, TDS	7	May-07-18 09:58	pH = 6	
TKN DA	28	May-28-18 09:58	pH = 2	
TOC	28	May-28-18 09:58	pH = 2	
Total Phosphorus DA	28	May-28-18 09:58	pH = 2	

Sample ID: <u>1805005-11</u> Sampled: <u>Apr-30-18 10:09</u> Matrix: <u>Water</u>

Sample Name: A4b Sample Location/Comments: Cranberry Rock Road

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 10:09	pH = 2	
Anions by IC	28	May-28-18 10:09	pH = 5	
Metals ICP-AES (w)	180	Oct-27-18 10:09	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 10:09	pH = 2	
Solids, TDS	7	May-07-18 10:09	pH = 5	
TKN DA	28	May-28-18 10:09	pH = 2	
TOC	28	May-28-18 10:09	pH = 2	
Total Phosphorus DA	28	May-28-18 10:09	pH = 2	

Sample ID: <u>1805005-12</u> Sampled: <u>Apr-30-18 10:51</u> Matrix: <u>Water</u>

Sample Name: <u>B1a</u> Sample Location/Comments: <u>20th Avenue</u>

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 10:51	pH = 3	
Anions by IC	28	May-28-18 10:51	pH = 5	
Metals ICP-AES (w)	180	Oct-27-18 10:51	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 10:51	pH = 3	
Solids, TDS	7	May-07-18 10:51	pH = 5	
TKN DA	28	May-28-18 10:51	pH = 3	
TOC	28	May-28-18 10:51	pH = 3	
Total Phosphorus DA	28	May-28-18 10:51	pH = 3	

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5

Project: Central Sands

Project Manager: Angela Ockrassa Davis

Project Number: [none]

Sample ID: <u>1805005-13</u> Sampled: <u>Apr-30-18 10:58</u> Matrix: <u>Water</u>

Sample Name: <u>B1b</u> Sample Location/Comments: <u>20th Avenue</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 10:58	pH = 2
Anions by IC	28	May-28-18 10:58	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 10:58	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 10:58	pH = 2
Solids, TDS	7	May-07-18 10:58	pH = 5
TKN DA	28	May-28-18 10:58	pH = 2
TOC	28	May-28-18 10:58	pH = 2
Total Phosphorus DA	28	May-28-18 10:58	pH = 2

Sample ID: 1805005-14 Sampled: <u>Apr-30-18 11:40</u> Matrix: <u>Water</u>

Sample Name: <u>B2a</u> Sample Location/Comments: <u>3rd Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 11:40	pH = 2	
Anions by IC	28	May-28-18 11:40	pH = 7	
Metals ICP-AES (w)	180	Oct-27-18 11:40	pH = 4	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 11:40	pH = 2	
Solids, TDS	7	May-07-18 11:40	pH = 7	
TKN DA	28	May-28-18 11:40	pH = 2	
TOC	28	May-28-18 11:40	pH = 2	
Total Phosphorus DA	28	May-28-18 11:40	pH = 2	

Sample ID: <u>1805005-15</u> Sampled: <u>Apr-30-18 11:48</u> Matrix: <u>Water</u>

Sample Name: <u>B2b</u> Sample Location/Comments: <u>3rd Street</u>

Sample Comments.				
Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 11:48	pH = 2	
Anions by IC	28	May-28-18 11:48	pH = 5	
Metals ICP-AES (w)	180	Oct-27-18 11:48	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 11:48	pH = 2	
Solids, TDS	7	May-07-18 11:48	pH = 5	
TKN DA	28	May-28-18 11:48	pH = 2	
TOC	28	May-28-18 11:48	pH = 2	

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5

Project Manager:

Angela Ockrassa Davis

none

Project: Central Sands

Project Number:

Sample ID: 1805005-15 Sampled: Apr-30-18 11:48 Matrix: Water

Sample Name: B2b Sample Location/Comments: 3rd Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-28-18 11:48	pH = 2

Sample ID: <u>1805005-16</u> Sampled: <u>Apr-30-18 12:29</u> Matrix: <u>Water</u>

Sample Name: <u>B3a</u> Sample Location/Comments: <u>3rd Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 12:29	pH = 2	
Anions by IC	28	May-28-18 12:29	pH = 6	
Metals ICP-AES (w)	180	Oct-27-18 12:29	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 12:29	pH = 2	
Solids, TDS	7	May-07-18 12:29	pH = 6	
TKN DA	28	May-28-18 12:29	pH = 2	
TOC	28	May-28-18 12:29	pH = 2	
Total Phosphorus DA	28	May-28-18 12:29	pH = 2	

Sample ID: <u>1805005-17</u> Sampled: <u>Apr-30-18 12:36</u> Matrix: <u>Water</u>

Sample Name: <u>B3b</u> Sample Location/Comments: <u>3rd Street</u>

Sample Comments:

Hold time (days)	Expires	Comments
28	May-28-18 12:36	pH = 2
28	May-28-18 12:36	pH = 5
180	Oct-27-18 12:36	pH = 3
28	May-28-18 12:36	pH = 2
7	May-07-18 12:36	pH = 5
28	May-28-18 12:36	pH = 2
28	May-28-18 12:36	pH = 2
28	May-28-18 12:36	pH = 2
	28 28 180 28 7 28 28	28 May-28-18 12:36 28 May-28-18 12:36 180 Oct-27-18 12:36 28 May-28-18 12:36 7 May-07-18 12:36 28 May-28-18 12:36 28 May-28-18 12:36

Sample ID: <u>1805005-18</u> Sampled: <u>Apr-30-18 13:10</u> Matrix: <u>Water</u>

Sample Name: <u>B4a</u> Sample Location/Comments: <u>3rd Street</u>

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 13:10	pH = 2	
Anions by IC	28	May-28-18 13:10	pH = 5	

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5

Project Manager:

Angela Ockrassa Davis

[none]

Project: Central Sands

Project Number:

Sample ID: <u>1805005-18</u> Sampled: <u>Apr-30-18 13:10</u> Matrix: <u>Water</u>

Sample Name: <u>B4a</u> Sample Location/Comments: <u>3rd Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Metals ICP-AES (w)	180	Oct-27-18 13:10	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 13:10	pH = 2	
Solids, TDS	7	May-07-18 13:10	pH = 5	
TKN DA	28	May-28-18 13:10	pH = 2	
TOC	28	May-28-18 13:10	pH = 2	
Total Phosphorus DA	28	May-28-18 13:10	pH = 2	

Sample ID: 1805005-19 Sampled: <u>Apr-30-18 13:41</u> Matrix: <u>Water</u>

Sample Name: <u>B4b</u> Sample Location/Comments: <u>3rd Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 13:41	pH = 2	
Anions by IC	28	May-28-18 13:41	pH = 5	
Metals ICP-AES (w)	180	Oct-27-18 13:41	pH = 4	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 13:41	pH = 2	
Solids, TDS	7	May-07-18 13:41	pH = 5	
TKN DA	28	May-28-18 13:41	pH = 2	
TOC	28	May-28-18 13:41	pH = 2	
Total Phosphorus DA	28	May-28-18 13:41	pH = 2	

Sample ID: <u>1805005-20</u> Sampled: <u>Apr-30-18 15:02</u> Matrix: <u>Water</u>

Sample Name: C1a Sample Location/Comments: 2nd Street

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 15:02	pH = 2	
Anions by IC	28	May-28-18 15:02	pH = 5	
Metals ICP-AES (w)	180	Oct-27-18 15:02	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 15:02	pH = 2	
Solids, TDS	7	May-07-18 15:02	pH = 5	
TKN DA	28	May-28-18 15:02	pH = 2	
TOC	28	May-28-18 15:02	pH = 2	
Total Phosphorus DA	28	May-28-18 15:02	pH = 2	

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager: Angela Ockrassa Davis

Project: Central Sands Project Number: [none]

Sample ID: <u>1805005-21</u> Sampled: <u>Apr-30-18 15:27</u> Matrix: <u>Water</u>

Sample Name: C1b Sample Location/Comments: 2nd Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 15:27	pH = 2
Anions by IC	28	May-28-18 15:27	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 15:27	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 15:27	pH = 2
Solids, TDS	7	May-07-18 15:27	pH = 5
TKN DA	28	May-28-18 15:27	pH = 2
TOC	28	May-28-18 15:27	pH = 2
Total Phosphorus DA	28	May-28-18 15:27	pH = 2

Sample ID: 1805005-22 Sampled: <u>Apr-30-18 16:06</u> Matrix: <u>Water</u>

Sample Name: C2a Sample Location/Comments: Nelson Road

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	***************************************
Ammonia N DA, Distilled	28	May-28-18 16:06	pH = 2	
Anions by IC	28	May-28-18 16:06	pH = 5	
Metals ICP-AES (w)	180	Oct-27-18 16:06	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 16:06	pH = 2	
Solids, TDS	7	May-07-18 16:06	pH = 5	
TKN DA	28	May-28-18 16:06	pH = 2	
TOC	28	May-28-18 16:06	pH = 2	
Total Phosphorus DA	28	May-28-18 16:06	pH = 2	

Sample ID: <u>1805005-23</u> Sampled: <u>Apr-30-18 16:14</u> Matrix: <u>Water</u>

Sample Name: C2b Sample Location/Comments: Nelson Road

Sample Comments.				
Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-28-18 16:14	pH = 2	
Anions by IC	28	May-28-18 16:14	pH = 5	
Metals ICP-AES (w)	180	Oct-27-18 16:14	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 16:14	pH = 2	
Solids, TDS	7	May-07-18 16:14	pH = 5	
TKN DA	28	May-28-18 16:14	pH = 2	
TOC	28	May-28-18 16:14	pH = 2	

WORK ORDER

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5

Project Manager:

Angela Ockrassa Davis

Printed: 5/3/2018 3:33:25PM

Project: Central Sands

Project Number:

none

Sample ID: 1805005-23 Sampled: <u>Apr-30-18 16:14</u> Matrix: <u>Water</u>

Sample Name: C2b Sample Location/Comments: Nelson Road

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-28-18 16:14	pH = 2

Sample ID: <u>1805005-24</u> Sampled: <u>Apr-30-18 14:16</u> Matrix: <u>Water</u>

Sample Name: <u>C3a</u> Sample Location/Comments: <u>3rd Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 14:16	pH = 2
Anions by IC	28	May-28-18 14:16	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 14:16	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 14:16	pH = 2
Solids, TDS	7	May-07-18 14:16	pH = 5
TKN DA	28	May-28-18 14:16	pH = 2
TOC	28	May-28-18 14:16	pH = 2
Total Phosphorus DA	28	May-28-18 14:16	pH = 2

Sample ID: <u>1805005-25</u> Sampled: <u>Apr-30-18 14:26</u> Matrix: <u>Water</u>

Sample Name: C3b Sample Location/Comments: 3rd Street

Sample Comments:

Hold time (days)	Expires	Comments	
28	May-28-18 14:26	pH = 2	
28	May-28-18 14:26	pH = 5	
180	Oct-27-18 14:26	pH = 2	
28	May-28-18 14:26	pH = 2	
7	May-07-18 14:26	pH = 5	
28	May-28-18 14:26	pH = 2	
28	May-28-18 14:26	pH = 2	
28	May-28-18 14:26	pH = 2	
	28 28 180 28 7 28 28	28 May-28-18 14:26 28 May-28-18 14:26 180 Oct-27-18 14:26 28 May-28-18 14:26 7 May-07-18 14:26 28 May-28-18 14:26 28 May-28-18 14:26	28

Sample ID: <u>1805005-26</u> Sampled: <u>May-01-18 06:29</u> Matrix: <u>Water</u>

Sample Name: C5Aa Sample Location/Comments: CR G (Nelson Road)

Sterring to Committee and St				
Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 06:29	pH = 2	
Anions by IC	28	May-29-18 06:29	pH = 5	

Angela Ockrassa Davis

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager:

Project: Central Sands Project Number: [none]

Sample ID: 1805005-26 Sampled: May-01-18 06:29 Matrix: Water

Sample Name: C5Aa Sample Location/Comments: CR G (Nelson Road)

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Metals ICP-AES (w)	180	Oct-28-18 06:29	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 06:29	pH = 2	
Solids, TDS	7	May-08-18 06:29	pH = 5	
TKN DA	28	May-29-18 06:29	pH = 2	
TOC	28	May-29-18 06:29	pH = 2	
Total Phosphorus DA	28	May-29-18 06:29	pH = 2	

Sample ID: <u>1805005-27</u> Sampled: <u>May-01-18 06:43</u> Matrix: <u>Water</u>

Sample Name: <u>C5Ab</u> Sample Location/Comments: <u>CR G (Nelson Road)</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 06:43	pH = 2
Anions by IC	28	May-29-18 06:43	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 06:43	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 06:43	pH = 2
Solids, TDS	7	May-08-18 06:43	pH = 5
TKN DA	28	May-29-18 06:43	pH = 2
TOC	28	May-29-18 06:43	pH = 2
Total Phosphorus DA	28	May-29-18 06:43	pH = 2

Sample ID: <u>1805005-28</u> Sampled: <u>May-01-18 07:06</u> Matrix: <u>Water</u>

Sample Name: C6a Sample Location/Comments: CR G (Nelson Road)

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 07:06	pH = 2	
Anions by IC	28	May-29-18 07:06	pH = 6	
Metals ICP-AES (w)	180	Oct-28-18 07:06	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:06	pH = 2	
Solids, TDS	7	May-08-18 07:06	pH = 6	
TKN DA	28	May-29-18 07:06	pH = 2	
TOC	28	May-29-18 07:06	pH = 2	
Total Phosphorus DA	28	May-29-18 07:06	pH = 2	

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager: Angela Ockrassa Davis

Project: Central Sands Project Number: [none]

Sample ID: <u>1805005-29</u> Sampled: <u>May-01-18 07:15</u> Matrix: <u>Water</u>

Sample Name: C6b Sample Location/Comments: CR G (Nelson Road)

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:15	pH = 3
Anions by IC	28	May-29-18 07:15	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 07:15	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:15	pH = 3
Solids, TDS	7	May-08-18 07:15	pH = 5
TKN DA	28	May-29-18 07:15	pH = 3
TOC	28	May-29-18 07:15	pH = 3
Total Phosphorus DA	28	May-29-18 07:15	pH = 3

Sample ID: 1805005-30 Sampled: May-01-18 07:48 Matrix: Water

Sample Name: C7a Sample Location/Comments: 4th Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 07:48	pH = 2	
Anions by IC	28	May-29-18 07:48	pH = 6	
Metals ICP-AES (w)	180	Oct-28-18 07:48	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:48	pH = 2	
Solids, TDS	7	May-08-18 07:48	pH = 6	
TKN DA	28	May-29-18 07:48	pH = 2	
TOC	28	May-29-18 07:48	pH = 2	
Total Phosphorus DA	28	May-29-18 07:48	pH = 2	

Sample ID: <u>1805005-31</u> Sampled: <u>May-01-18 08:02</u> Matrix: <u>Water</u>

Sample Name: C7b Sample Location/Comments: 4th Street

Sample Comments.				
Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 08:02	pH = 2	
Anions by IC	28	May-29-18 08:02	pH = 5	
Metals ICP-AES (w)	180	Oct-28-18 08:02	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:02	pH = 2	
Solids, TDS	7	May-08-18 08:02	pH = 5	
TKN DA	28	May-29-18 08:02	pH = 2	
TOC	28	May-29-18 08:02	pH = 2	

WORK ORDER

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager: Angela Ockrassa Davis

Project: Central Sands Project Number: [none]

Sample ID: <u>1805005-31</u> Sampled: <u>May-01-18 08:02</u> Matrix: <u>Water</u>

Sample Name: C7b Sample Location/Comments: 4th Street

Sample Comments:

 Analysis
 Hold time (days)
 Expires
 Comments

 Total Phosphorus DA
 28
 May-29-18 08:02
 pH = 2

Sample ID: <u>1805005-32</u> Sampled: <u>May-01-18 07:39</u> Matrix: <u>Water</u>

Sample Name: FB2 Sample Location/Comments: 4th Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 07:39	pH = 2	
Anions by IC	28	May-29-18 07:39	pH = 4	
Metals ICP-AES (w)	180	Oct-28-18 07:39	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:39	pH = 2	
Solids, TDS	7	May-08-18 07:39	pH = 4	
TKN DA	28	May-29-18 07:39	pH = 2	
TOC	28	May-29-18 07:39	pH = 2	
Total Phosphorus DA	28	May-29-18 07:39	pH = 2	

Sample ID: 1805005-33 Sampled: May-01-18 07:38 Matrix: Water

Sample Name: C7 equip Sample Location/Comments: 4th Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:38	pH = 2
Anions by IC	28	May-29-18 07:38	pH = 4
Metals ICP-AES (w)	180	Oct-28-18 07:38	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:38	pH = 2
Solids, TDS	7	May-08-18 07:38	pH = 4
TKN DA	28	May-29-18 07:38	pH = 2
TOC	28	May-29-18 07:38	pH = 2
Total Phosphorus DA	28	May-29-18 07:38	pH = 2

Sample ID: <u>1805005-34</u> Sampled: <u>May-01-18 08:02</u> Matrix: <u>Water</u>

Sample Name: C7 Dup Sample Location/Comments: 4th Street

Sample Comments:

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Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 08:02	pH = 2	
Anions by IC	28	May-29-18 08:02	pH = 5	

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1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager: Angela Ockrassa Davis

Project: Central Sands Project Number: [none]

Sample ID: <u>1805005-34</u> Sampled: <u>May-01-18 08:02</u> Matrix: <u>Water</u>

Sample Name: C7 Dup Sample Location/Comments: 4th Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Metals ICP-AES (w)	180	Oct-28-18 08:02	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:02	pH = 2	
Solids, TDS	7	May-08-18 08:02	pH = 5	
TKN DA	28	May-29-18 08:02	pH = 2	
TOC	28	May-29-18 08:02	pH = 2	
Total Phosphorus DA	28	May-29-18 08:02	pH = 2	

Sample ID: <u>1805005-35</u> Sampled: <u>May-01-18 08:35</u> Matrix: <u>Water</u>

Sample Name: C8a Sample Location/Comments: 4th Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 08:35	pH = 2	
Anions by IC	28	May-29-18 08:35	pH = 5	
Metals ICP-AES (w)	180	Oct-28-18 08:35	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:35	pH = 2	
Solids, TDS	7	May-08-18 08:35	pH = 5	
TKN DA	28	May-29-18 08:35	pH = 2	
TOC	28	May-29-18 08:35	pH = 2	
Total Phosphorus DA	28	May-29-18 08:35	pH = 2	

Sample ID: <u>1805005-36</u> Sampled: <u>May-01-18 08:42</u> Matrix: <u>Water</u>

Sample Name: C8b Sample Location/Comments: 4th Street

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 08:42	pH = 2	
Anions by IC	28	May-29-18 08:42	pH = 5	
Metals ICP-AES (w)	180	Oct-28-18 08:42	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:42	pH = 2	
Solids, TDS	7	May-08-18 08:42	pH = 5	
TKN DA	28	May-29-18 08:42	pH = 2	
TOC	28	May-29-18 08:42	pH = 2	
Total Phosphorus DA	28	May-29-18 08:42	pH = 2	

1805005

US EPA Region 5 Chicago Regional Laboratory

Project Manager:

Angela Ockrassa Davis

Client: Water Division, WECA Region 5

Project: Central Sands Project Number: [none]

Sample ID: 1805005-37 Sampled: May-01-18 10:00 Matrix: Water

Sample Name: C9a Sample Location/Comments: 4th Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 10:00	pH = 2
Anions by IC	28	May-29-18 10:00	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 10:00	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 10:00	pH = 2
Solids, TDS	7	May-08-18 10:00	pH = 5
TKN DA	28	May-29-18 10:00	pH = 2
TOC	28	May-29-18 10:00	pH = 2
Total Phosphorus DA	28	May-29-18 10:00	pH = 2

Sample ID: 1805005-38 Sampled: May-01-18 10:21 Matrix: Water

Sample Name: C9b Sample Location/Comments: 4th Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 10:21	pH = 2	
Anions by IC	28	May-29-18 10:21	pH = 5	
Metals ICP-AES (w)	180	Oct-28-18 10:21	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 10:21	pH = 2	
Solids, TDS	7	May-08-18 10:21	pH = 5	
TKN DA	28	May-29-18 10:21	pH = 2	
TOC	28	May-29-18 10:21	pH = 2	
Total Phosphorus DA	28	May-29-18 10:21	pH = 2	

Sample ID: <u>1805005-39</u> Sampled: <u>May-01-18 11:05</u> Matrix: <u>Water</u>

Sample Name: C10a Sample Location/Comments: 4th Street

ampie Comments:				
Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 11:05	pH = 2	
Anions by IC	28	May-29-18 11:05	pH = 6	
Metals ICP-AES (w)	180	Oct-28-18 11:05	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:05	pH = 2	
Solids, TDS	7	May-08-18 11:05	pH = 6	
TKN DA	28	May-29-18 11:05	pH = 2	
TOC	28	May-29-18 11:05	pH = 2	

WORK ORDER

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager: Angela Ockrassa Davis

Project: Central Sands Project Number: [none]

Sample ID: <u>1805005-39</u> Sampled: <u>May-01-18 11:05</u> Matrix: <u>Water</u>

Sample Name: C10a Sample Location/Comments: 4th Street

Sample Comments:

 Analysis
 Hold time (days)
 Expires
 Comments

 Total Phosphorus DA
 28
 May-29-18 11:05
 pH = 2

Sample ID: <u>1805005-40</u> Sampled: <u>May-01-18 11:12</u> Matrix: <u>Water</u>

Sample Name: C10b Sample Location/Comments: 4th Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 11:12	pH = 2
Anions by IC	28	May-29-18 11:12	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 11:12	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:12	pH = 2
Solids, TDS	7	May-08-18 11:12	pH = 5
TKN DA	28	May-29-18 11:12	pH = 2
TOC	28	May-29-18 11:12	pH = 2
Total Phosphorus DA	28	May-29-18 11:12	pH = 2

Sample ID: 1805005-41 Sampled: May-01-18 11:46 Matrix: Water

Sample Name: C11a Sample Location/Comments: 20th Avenue

Sample Comments:

Hold time (days)	Expires	Comments	
28	May-29-18 11:46	pH = 3	
28	May-29-18 11:46	pH = 6	
180	Oct-28-18 11:46	pH = 2	
28	May-29-18 11:46	pH = 3	
7	May-08-18 11:46	pH = 6	
28	May-29-18 11:46	pH = 3	
28	May-29-18 11:46	pH = 3	
28	May-29-18 11:46	pH = 3	
	28 28 180 28 7 28 28	28 May-29-18 11:46 28 May-29-18 11:46 180 Oct-28-18 11:46 28 May-29-18 11:46 7 May-08-18 11:46 28 May-29-18 11:46 28 May-29-18 11:46	28

Sample ID: <u>1805005-42</u> Sampled: <u>May-01-18 11:52</u> Matrix: <u>Water</u>

Sample Name: C11b Sample Location/Comments: 20th Avenue

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 11:52	pH = 2
Anions by IC	28	May-29-18 11:52	pH = 5

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1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager: Angela Ockrassa Davis

Project: Central Sands Project Number: [none]

Sample ID: <u>1805005-42</u> Sampled: <u>May-01-18 11:52</u> Matrix: <u>Water</u>

Sample Name: C11b Sample Location/Comments: 20th Avenue

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Metals ICP-AES (w)	180	Oct-28-18 11:52	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:52	pH = 2	
Solids, TDS	7	May-08-18 11:52	pH = 5	
TKN DA	28	May-29-18 11:52	pH = 2	
TOC	28	May-29-18 11:52	pH = 2	
Total Phosphorus DA	28	May-29-18 11:52	pH = 2	

Sample ID: <u>1805005-43</u> Sampled: <u>May-01-18 12:41</u> Matrix: <u>Water</u>

Sample Name: C12a Sample Location/Comments: 19th Avenue

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 12:41	pH = 2	
Anions by IC	28	May-29-18 12:41	pH = 7	
Metals ICP-AES (w)	180	Oct-28-18 12:41	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 12:41	pH = 2	
Solids, TDS	7	May-08-18 12:41	pH = 7	
TKN DA	28	May-29-18 12:41	pH = 2	
TOC	28	May-29-18 12:41	pH = 2	
Total Phosphorus DA	28	May-29-18 12:41	pH = 2	

Sample ID: <u>1805005-44</u> Sampled: <u>May-01-18 12:47</u> Matrix: <u>Water</u>

Sample Name: C12b Sample Location/Comments: 19th Avenue

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 12:47	pH = 2	
Anions by IC	28	May-29-18 12:47	pH = 7	
Metals ICP-AES (w)	180	Oct-28-18 12:47	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 12:47	pH = 2	
Solids, TDS	7	May-08-18 12:47	pH = 7	
TKN DA	28	May-29-18 12:47	pH = 2	
TOC	28	May-29-18 12:47	pH = 2	
Total Phosphorus DA	28	May-29-18 12:47	pH = 2	

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager: Angela Ockrassa Davis

Project: Central Sands Project Number: [none]

Sample ID: <u>1805005-45</u> Sampled: <u>May-01-18 13:30</u> Matrix: <u>Water</u>

Sample Name: C13a Sample Location/Comments: 4th Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 13:30	pH = 3
Anions by IC	28	May-29-18 13:30	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 13:30	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 13:30	pH = 3
Solids, TDS	7	May-08-18 13:30	pH = 6
TKN DA	28	May-29-18 13:30	pH = 3
TOC	28	May-29-18 13:30	pH = 3
Total Phosphorus DA	28	May-29-18 13:30	pH = 3

Sample ID: 1805005-46 Sampled: May-01-18 13:39 Matrix: Water

Sample Name: C13b Sample Location/Comments: 4th Street

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 13:39	pH = 2
Anions by IC	28	May-29-18 13:39	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 13:39	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 13:39	pH = 2
Solids, TDS	7	May-08-18 13:39	pH = 5
TKN DA	28	May-29-18 13:39	pH = 2
TOC	28	May-29-18 13:39	pH = 2
Total Phosphorus DA	28	May-29-18 13:39	pH = 2

Sample ID: <u>1805005-47</u> Sampled: <u>May-01-18 14:19</u> Matrix: <u>Water</u>

Sample Name: <u>D1a</u> Sample Location/Comments: <u>5th Street</u>

Sample Comments.				
Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 14:19	pH = 2	
Anions by IC	28	May-29-18 14:19	pH = 6	
Metals ICP-AES (w)	180	Oct-28-18 14:19	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 14:19	pH = 2	
Solids, TDS	7	May-08-18 14:19	pH = 6	
TKN DA	28	May-29-18 14:19	pH = 2	
TOC	28	May-29-18 14:19	pH = 2	

WORK ORDER

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager: Angela Ockrassa Davis

Project: Central Sands Project Number: [none]

Sample ID: <u>1805005-47</u> Sampled: <u>May-01-18 14:19</u> Matrix: <u>Water</u>

Sample Name: <u>D1a</u> Sample Location/Comments: <u>5th Street</u>

Sample Comments:

 Analysis
 Hold time (days)
 Expires
 Comments

 Total Phosphorus DA
 28
 May-29-18 14:19
 pH = 2

Sample ID: 1805005-48 Sampled: May-01-18 14:26 Matrix: Water

Sample Name: <u>D1b</u> Sample Location/Comments: <u>5th Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 14:26	pH = 3
Anions by IC	28	May-29-18 14:26	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 14:26	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 14:26	pH = 3
Solids, TDS	7	May-08-18 14:26	pH = 5
TKN DA	28	May-29-18 14:26	pH = 3
TOC	28	May-29-18 14:26	pH = 3
Total Phosphorus DA	28	May-29-18 14:26	pH = 3

Sample ID: <u>1805005-49</u> Sampled: <u>May-01-18 15:00</u> Matrix: <u>Water</u>

Sample Name: <u>D2a</u> Sample Location/Comments: <u>5th Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 15:00	pH = 3
Anions by IC	28	May-29-18 15:00	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 15:00	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:00	pH = 3
Solids, TDS	7	May-08-18 15:00	pH = 6
TKN DA	28	May-29-18 15:00	pH = 3
TOC	28	May-29-18 15:00	pH = 3
Total Phosphorus DA	28	May-29-18 15:00	pH = 3

Sample ID: <u>1805005-50</u> Sampled: <u>May-01-18 15:06</u> Matrix: <u>Water</u>

Sample Name: <u>D2b</u> Sample Location/Comments: <u>5th Street</u>

Sample Comments:

String to Committee to the contract of the con				
Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 15:06	pH = 2	
Anions by IC	28	May-29-18 15:06	pH = 6	

Printed: 5/3/2018 3:33:25PM

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5 Project Manager: Angela Ockrassa Davis

Project: Central Sands Project Number: [none]

Sample ID: <u>1805005-50</u> Sampled: <u>May-01-18 15:06</u> Matrix: <u>Water</u>

Sample Name: <u>D2b</u> Sample Location/Comments: <u>5th Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Metals ICP-AES (w)	180	Oct-28-18 15:06	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:06	pH = 2	
Solids, TDS	7	May-08-18 15:06	pH = 6	
TKN DA	28	May-29-18 15:06	pH = 2	
TOC	28	May-29-18 15:06	pH = 2	
Total Phosphorus DA	28	May-29-18 15:06	pH = 2	

Sample ID: <u>1805005-51</u> Sampled: <u>May-01-18 15:41</u> Matrix: <u>Water</u>

Sample Name: <u>D3a</u> Sample Location/Comments: <u>5th Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 15:41	pH = 2	
Anions by IC	28	May-29-18 15:41	pH = 6	
Metals ICP-AES (w)	180	Oct-28-18 15:41	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:41	pH = 2	
Solids, TDS	7	May-08-18 15:41	pH = 6	
TKN DA	28	May-29-18 15:41	pH = 2	
TOC	28	May-29-18 15:41	pH = 2	
Total Phosphorus DA	28	May-29-18 15:41	pH = 2	

Sample ID: <u>1805005-52</u> Sampled: <u>May-01-18 15:48</u> Matrix: <u>Water</u>

Sample Name: <u>D3b</u> Sample Location/Comments: <u>5th Street</u>

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	May-29-18 15:48	pH = 2	
Anions by IC	28	May-29-18 15:48	pH = 5	
Metals ICP-AES (w)	180	Oct-28-18 15:48	pH = 2	
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:48	pH = 2	
Solids, TDS	7	May-08-18 15:48	pH = 5	
TKN DA	28	May-29-18 15:48	pH = 2	
TOC	28	May-29-18 15:48	pH = 2	
Total Phosphorus DA	28	May-29-18 15:48	pH = 2	

1805005

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5

Project Manager:

Angela Ockrassa Davis

Project: Central Sands

Project Number: [none]

Sample ID: <u>1805005-53</u> Sampled: <u>May-01-18 16:19</u> Matrix: <u>Water</u>

Sample Name: <u>D4a</u> Sample Location/Comments: <u>5th Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 16:19	pH = 2
Anions by IC	28	May-29-18 16:19	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 16:19	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 16:19	pH = 2
Solids, TDS	7	May-08-18 16:19	pH = 6
TKN DA	28	May-29-18 16:19	pH = 2
TOC	28	May-29-18 16:19	pH = 2
Total Phosphorus DA	28	May-29-18 16:19	pH = 2

Sample ID: <u>1805005-54</u> Sampled: <u>May-01-18 16:26</u> Matrix: <u>Water</u>

Sample Name: <u>D4b</u> Sample Location/Comments: <u>5th Street</u>

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 16:26	pH = 2
Anions by IC	28	May-29-18 16:26	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 16:26	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 16:26	pH = 2
Solids, TDS	7	May-08-18 16:26	pH = 5
TKN DA	28	May-29-18 16:26	pH = 2
TOC	28	May-29-18 16:26	pH = 2
Total Phosphorus DA	28	May-29-18 16:26	pH = 2

WORK ORDER MEMO: NCR 14118

PROJECT COMMENTS: Anions: Chloride, fluoride, bromide, sullfate.

Full List metals

REVIEWED

By Amanda Wroble at 3:35 pm, May 03, 2018

Reviewed By Date



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

A1a (1805005-01)	Matrix: Water	Samp	pled: Apr-	30-18 07:19	Recei	ved: May-02	-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	11.9			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	n	n .	n n		11
Arsenic	U			0.0400	n	n	И	II .	11
Barium	0.462			0.003	"	"	h	"	"
Beryllium	U			0.002	п	H	п	n	0
Boron	U			0.0500	н	H	и	1)	
Cadmium	U			0.002	n	H	н	B	11
Calcium	51.4			0.200	п	n	И	n	n
Chromium	0.472			0.005	н	Ħ	В	"	"
Cobalt	0.0270			0.006	н	н	IJ	D	n
Copper	0.316			0.0200	н	н	в	ij	15
Iron	115			0.0800	n	n	И	И	п
Lead	U			0.0300	n	n	В	IJ	n
Lithium	U			0.0250	н	н	В	II .	n
Magnesium	22.1			0.200	n	n .	В	11	n
Manganese	2.11			0.008	n	H	В	II	н
Molybdenum	0.0219			0.0120	n	n	И	ij	п
Nickel	0.120			0.0120	n	Ħ	11	"	"
Potassium	5.99			0.800	н	н	n	D	n
Selenium	U			0.0500	н	H	В	II .	11
Silver	U			0.0100	п	H	В	II	н
Sodium	4.81			0.400	n	н	В	"	n
Strontium	0.0951			0.003	н	н	n	ıı .	n .
Thallium	U			0.0600	н	н	n	D	0
Tin	U			0.0200	n	n	n	II .	#
Titanium	0.0529			0.006	n	n	И	и	и
Vanadium	0.0551			0.005	н	H	В	"	"
Zinc	0.436			0.0300	n	н	n	II .	"



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Analyte Aluminum	Result	Flags / Qualifiers	MDL	Reporting					
	8.63		WIDD	Limit	Units	Dilution	Batch	Prepared	Analyzed
<u> </u>				0.200	mg/L	l	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	n	н	II	n	n
Arsenic	U			0.0400	"	n .	n	11	15
Barium	0.363			0.003	"	"	"	"	n
Beryllium	U			0.002	n	"	ņ	"	n .
Boron	U			0.0500	H .	II II	11	"	"
Cadmium	U			0.002	н	н	n	n	n
Calcium	16.5			0.200	н	н	н	IJ	15
Chromium	0.403			0.005	n	n	Ħ	ii	н
Cobalt	0.0225			0.006	н	н	И	li .	п
Copper	0.254			0.0200	н	н	n	"	n
Iron	43.1			0.0800	н	н	и	IJ	В
Lead	U			0.0300	n	н	H	н	н
Lithium	U			0.0250	n	п	"	H	n
Magnesium	5.13			0.200	н	н	ij	"	"
Manganese	1.03			0.008	н	н	n	n	n
Molybdenum	U			0.0120	n	п	n	"	n
Nickel	0.0694			0.0120	n	"	II .	15	п
Potassium	3.11			0.800	"	n	n	"	n .
Selenium	U			0.0500	н	н	n	"	n n
Silver	U			0.0100	п	н	n	n	n
Sodium	3.14			0.400	n	"	"	"	
Strontium	0.0829			0.003	n	n	H	В	11
Thallium	U			0.0600	"	"	'n	"	"
Tin	U			0.0200	п	н	n	II .	n
Titanium	0.0316			0.006	n	н	n	19	11
Vanadium	0.0204			0.005	n	п	II .	II	11
Zinc	0.291			0.0300	n	п	н	н	п



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5Project: Central Sands77 West Jackson BoulevardProject Number: CB022018Chicago IL, 60604Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

A2a (1805005-03)	Matrix: Water	Samj	pled: Apr-3	30-18 08:15	Recei	ved: May-02	-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	12.1			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	н	н	n	0	0
Arsenic	U			0.0400	"	H	Ŋ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Barium	0.352			0.003	"	"	II .	"	"
Beryllium	U			0.002	11	H	н	H	11
Boron	U			0.0500	11	н	n	"	"
Cadmium	U			0.002	н	н	п	n	n
Calcium	51.9			0.200	11	н	В	Ŋ	11
Chromium	0.453			0.005	п	n	В	И	п
Cobalt	0.0206			0.006	н	н	р	В	n
Copper	0.304			0.0200	н	н	n	"	n
Iron	98.4			0.0800	н	н	п	n .	n
Lead	U			0.0300	n	n .	В	В	В
Lithium	U			0.0250	n	n	II .	"	n .
Magnesium	24.6			0.200	11	"	п	"	"
Manganese	2.27			0.008	н	н	п	D	n
Molybdenum	0.0251			0.0120	"	"	и	"	"
Nickel	0.114			0.0120	n	"	н	15	"
Potassium	5.54			0.800	n	n	р	"	"
Selenium	U			0.0500	п	n	и	"	"
Silver	U			0.0100	п	п	и	n	1)
Sodium	4.39			0.400	"	"	n		
Strontium	0.0861			0.003	n	n	н	H.	11
Thallium	U			0.0600	"	"	h	"	"
Tin	U			0.0200	n	п	n	"	"
Titanium	0.0334			0.006	n	H	и	19	"
Vanadium	0.0490			0.005	n .	n .	n	II.	"
Zinc	0.157			0.0300	n	n	И	В	н



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

A2b (1805005-04)	Matrix: Water	Samp	oled: Apr-	30-18 08:24	Recei	ved: May-02	-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	3.05			0.200	mg/L	l	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	"	II .	IJ	n	"
Arsenic	U			0.0400	"	li .	n	"	"
Barium	0.394			0.003	"	II .	"	II	"
Beryllium	U			0.002	"	H	n	II.	"
Boron	U			0.0500	"	N	"	"	"
Cadmium	U			0.002	п	н	IJ	D	n
Calcium	174			0.200	n .	H	и	19	
Chromium	0.0351			0.005	n	n	IJ	H	11
Cobalt	U			0.006	H	Ħ	li li	it.	ı,
Copper	0.0295			0.0200	н	н	IJ	"	n
Iron	30.7			0.0800	н	Ħ	ij	11	0
Lead	U			0.0300	п	ij	н	В	В
Lithium	U			0.0250	п	н	IJ	И	и
Magnesium hi	72.2			0.200	n	ri .	В	11	"
Manganese	3.00			0.008	н	И	n	n	D
Molybdenum	U			0.0120	н	И	IJ	n	11
Nickel	0.0271			0.0120	п	II.	H	В	В
Potassium	2.04			0.800	n	Ħ	В	11	II.
Selenium	U			0.0500	н	Й	n	II	II .
Silver	U			0.0100	н	Й	n	Ü	D
Sodium	3.23			0.400	"	"	n	И	II .
Strontium	0.139			0.003	n	n	и	н	"
Thallium	U			0.0600	п	H	n	"	"
Tin	U			0.0200	н	И	n	n.	"
Titanium	0.0375			0.006	п	n	H	11	15
Vanadium	0.0151			0.005	"	II .	"	II .	"
Zinc	0.0724			0.0300	n	n	H	н	II.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

A3a (1805005-05) Matrix: Water Sampled: Apr-30-18 09:06 Received: May-02-18 09:55

A3a (1805005-05)	Matrix: Water	•			Recei	ved: May-02	-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	3.89			0.200	mg/L	l	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	"	H	11	0	n
Arsenic	U			0.0400	"	"	ii	11	15
Barium	0.203			0.003	"	"	"	II.	11
Beryllium	U			0.002	n	н	"	В	n .
Boron	U			0.0500	"	H	II	"	"
Cadmium	U			0.002	"	н	IJ	D	n
Calcium	78.8			0.200	"	"	ii	11	15
Chromium	0.124			0.005	n	н	IJ	H.	n .
Cobalt	0.0107			0.006	n	H	"	В	"
Copper	0.123			0.0200	n .	н	IJ	11	n .
Iron	51.6			0.0800	n	н	IJ	11	11
Lead	U			0.0300	"	"	H	15	11
Lithium	U			0.0250	"	n	II .	11	11
Magnesium hi	43.1			0.200	н	н	1)	11	"
Manganese	2.26			0.008	n	н	IJ	n	n
Molybdenum	0.0154			0.0120	n	H	IJ	IJ	11
Nickel	0.0447			0.0120	"	n .	ij	В	н
Potassium	2.83			0.800	"	н	Ŋ	"	"
Selenium	U			0.0500	"	н	II	"	"
Silver	U			0.0100	п	н	n	n	n
Sodium	2.56			0.400	"	"	ii	"	"
Strontium	0.0760			0.003	n	n	H	H	11
Thallium	U			0.0600	n	"	p	"	"
Tin	U			0.0200	п	Ħ	U	"	n.
Titanium	0.0271	J		0.006	n	H	н	19	11
Vanadium	0.0258			0.005	n	II .	IJ	11	11
Zinc	0.0846			0.0300	n	n	H	H	#



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

A3b (1805005-06)	Matrix: Water	Samp	Sampled: Apr-30-18 09:14		Received: May-02-18 09:55				
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	14.3			0.200	mg/L	l	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	n	n	n	n	"
Arsenic	U			0.0400	"	H.	n	"	"
Barium	0.559			0.003	n	H	H.	II.	11
Beryllium	0.0022			0.002	n	н	н	II.	11
Boron	U			0.0500	п	н	н	"	"
Cadmium	U			0.002	п	н	IJ	n	n
Calcium	27.5			0.200	n	"	н	11	"
Chromium	0.572			0.005	n	n	IJ	II .	"
Cobalt	0.0410			0.006	"	N	h	li .	"
Copper	0.336			0.0200	n	н	и	"	"
Iron	81.4			0.0800	п	и	и	"	"
Lead	U			0.0300	"	"	н	н	"
Lithium	U			0.0250	n	n	II .	II .	"
Magnesium	9.70			0.200	н	н	п	"	"
Manganese	2.45			0.008	н	н	п	n	0
Molybdenum	0.0138			0.0120	н	н	n	n .	"
Nickel	0.117			0.0120	и	н	В	н	н
Potassium	5.23			0.800	н	н	В	II .	"
Selenium	U			0.0500	н	И	n	n .	n .
Silver	U			0.0100	н	н	в	n	0
Sodium	3.20			0.400	n	"		"	"
Strontium	0.0934			0.003	n	п	н	В	"
Thallium	U			0.0600	11	п	В	"	"
Tin	U			0.0200	н	н	п	"	"
Titanium	0.0367			0.006	н	H.	и	II.	11
Vanadium	0.0241			0.005	n	H	n n	II .	II.
Zinc	0.299			0.0300	n	п	И	н	II.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

A4 Equip (1805005-07)	Matrix: Water		Sampled: Apr-30-18 09:38			Received: May-02-18 09:55			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	U			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	n	п	ıı	n	"
Arsenic	U			0.0400	"	"	ij	"	"
Barium	U			0.003	"	"	ii	II .	"
Beryllium	U			0.002	n	n	"	"	"
Boron	U			0.0500	"	11	"	"	"
Cadmium	U			0.002	н	н	11	n	"
Calcium	0.240			0.200	"	н	н	l)	19
Chromium	\mathbf{U}			0.005	n	n	U	II.	"
Cobalt	U			0.006		11	h	it.	ii.
Copper	U			0.0200	н	н	IJ	n.	"
Iron	0.0981			0.0800	п	н	n	II.	"
Lead	U			0.0300	"	н	H	н	в
Lithium	U			0.0250	n	п	U	H.	n.
Magnesium	U			0.200	"	11	IJ	"	"
Manganese	U			0.008	п	н	n	n	0
Molybdenum	U			0.0120	"	н	n	"	"
Nickel	\mathbf{U}			0.0120	п	н	Ħ	н	11
Potassium	U			0.800	п	н	n	II	"
Selenium	U			0.0500	п	н	10	n .	"
Silver	U			0.0100	п	н	n	n	n
Sodium	U			0.400	"	"	ii	II	"
Strontium	U			0.003	n	п	N	Ħ	n.
Thallium	U			0.0600	"	н	p	"	"
Tin	U			0.0200	n	н	n	n .	"
Titanium	U			0.006	"	н	и	н	11
Vanadium	U			0.005	n	н	IJ	H	II.
Zinc	U			0.0300	n	п	H	И	н



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Copper 0.0952 0.0200 "	08)
Antimony U 0.0200 " <	
Anteniny C 0.0400 * <	
Barium	
Beryllium U 0,0000	
Born U 0.0500 " " " " " " " " " " " " " " " " " "	
Bolton Condinium U 0.002 "	
Calcium 84.6 0.200 " " " Chronium 0.114 0.005 " " " Cobalt 0.0113 0.006 " " " " Copper 0.0952 0.0200 " " " " " Iron 57.3 0.0800 " <t< td=""><td></td></t<>	
Chromium 0.114 0.005 " " " " Cobalt 0.0113 0.006 " " " " Copper 0.0952 0.0200 " " " " Iron 57.3 0.0800 " " " " Lead U 0.0300 " " " " Magnesium hi 45.7 0.200 " " " " Magnese 2.22 0.008 " " " " Molybdenum 0.192 0.0120 " " " " Nickel 0.0554 0.0120 " " " " " Potassium 3.51 0.800 "	
Cobalt 0.0113 0.006 "	
Copper 0.0952 0.0200 "	
Ton	
Lead U 0.0300 " " " " Lithium U 0.0250 " " " " Magnesium hi 45.7 0.200 " " " " Manganese 2.22 0.008 " " " " Molybdenum 0.0192 0.0120 " " " " Nickel 0.0554 0.0120 " " " " Potassium 3.51 0.800 " " " " Selenium U 0.0500 " " " " Silver U 0.0100 " " " " " Strontium 0.0874 0.003 " " " " " " Thallium U 0.0600 " " " " " Titanium 0.0314 0.006 " " "	
Lithium U 0.0250 Nagnesium hi 45.7 0.200 U 0.008 U 0.008 U 0.0120 U 0	
Magnesium hi 45.7 0.200 "	
Manganese 2.22 0.008 "	
Molybdenum 0.0192 0.0120 "	
Nickel 0.0554 0.0120 "	
Potassium 3.51 0.800 "	
Selenium U 0.0500 " <	
Silver U 0.0100 " <th< td=""><td></td></th<>	
Sodium 2.79 0.400 " <	
Strontium 0.0874 0.003 "	
Thallium U 0.0600 " <	
Tin U 0.0200 " " " " Titanium 0.0314 0.006 " " " " "	(
Titanium 0.0314 0.006 " " " "	
Vanadium 0.0251 0.005 " " " "	
	(
Zinc 0.0866 0.0300 " " " "	(



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Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Analyte Result Flags / Qualifiers MDL Reporting Lumit Units Dilution Batch Aluminum U 0.200 mg/L 1 B18E013 Antimony U 0.0200 " " " Arsenic U 0.0400 " " " Barium U 0.002 " " " Beryllium U 0.002 " " " Boron U 0.0500 " " " Cadmium U 0.0500 " " " Chromium U 0.002 " " " Chromium U 0.005 " " " Cobalt U 0.005 " " " Cobalt U 0.000 " " " Lead U 0.0300 " " " Lead U 0.008	Matrix: Water		Sampled: Apr-30-18 09:49			Recei	ved: May-02			
Antimony	Resul			MDL		Units	Dilution	Batch	Prepared	Analyzed
Arsenic U 0.0400 " " " " " " " " " " " " " " " " " "	U		•••••		0.200	mg/L	1	B18E013	May-08-18	May-09-18
Barium U 0.003 " " " " " " " " "	U				0.0200	n	II	n	0	n
Beryllim	U				0.0400	"	li .	n	"	11
Boron U 0.0500 " " " "	U				0.003	n .	H	H.	"	н
Cadmium U 0.002 " " " Calcium U 0.200 " " " Chromium U 0.005 " " " Cobalt U 0.006 " " " Copper U 0.0200 " " " Iron U 0.0800 " " " Lead U 0.0300 " " " Lithium U 0.0250 " " " Magnesium U 0.0250 " " " Molybdenum U 0.0120 " " " Molybdenum U 0.0120 " " " Nickel U 0.0120 " " " Potassium U 0.0500 " " " Selenium U 0.0100 " " " "	U				0.002	n	H	h	"	п
Calcium U 0.200 " " " Chromium U 0.005 " " " Cobalt U 0.006 " " " Copper U 0.0200 " " " Iron U 0.0800 " " " Lead U 0.0300 " " " Lithium U 0.0250 " " " Magnesium U 0.0250 " " " Manganese U 0.008 " " " Molybdenum U 0.0120 " " " Nickel U 0.0120 " " " Potassium U 0.800 " " " Selenium U 0.0500 " " " Solium U 0.400 " " " Strontium <td>U</td> <td></td> <td></td> <td></td> <td>0.0500</td> <td>II .</td> <td>H</td> <td>n n</td> <td>!!</td> <td>n n</td>	U				0.0500	II .	H	n n	!!	n n
Chromium U 0.005 """"""""""""""""""""""""""""""""""""	U				0.002	н	Ħ	и	0	n
Choshit U 0.006 " " " Copper U 0.0200 " " " Iron U 0.0800 " " " Lead U 0.0300 " " " Lithium U 0.0250 " " " Magnesium U 0.200 " " " Manganese U 0.008 " " " Molybdenum U 0.0120 " " " Nickel U 0.0120 " " " Potassium U 0.800 " " " " Selenium U 0.0500 " " " " Silver U 0.0100 " " " " Solium U 0.003 " " " " Thallium U 0.0600 "	U				0.200	11	H	В	19	15
Copper U 0.0200 " " " Iron U 0.0800 " " " Lead U 0.0300 " " " Lithium U 0.0250 " " " Magnesium U 0.200 " " " Manganese U 0.008 " " " Molybdenum U 0.0120 " " " Nickel U 0.0120 " " " Potassium U 0.800 " " " Selenium U 0.0500 " " " Silver U 0.0100 " " " Sodium U 0.400 " " " Thallium U 0.0600 " " "	U				0.005	n	n	И	ij	н
Iron	U				0.006	11	Ħ	В	ß	и
Iron U 0.0800 " " " Lead U 0.0300 " " " Lithium U 0.0250 " " " Magnesium U 0.200 " " " Manganese U 0.008 " " " Molybdenum U 0.0120 " " " Nickel U 0.0120 " " " Potassium U 0.800 " " " Selenium U 0.0500 " " " Silver U 0.0100 " " " Sodium U 0.400 " " " Strontium U 0.0600 " " "	U				0.0200	н	н	п	11	n
Lithium U 0.0300 " " " Magnesium U 0.200 " " " Manganese U 0.008 " " " Molybdenum U 0.0120 " " " Nickel U 0.0120 " " " Potassium U 0.800 " " " Selenium U 0.0500 " " " Silver U 0.0100 " " " Sodium U 0.400 " " " Strontium U 0.003 " " " Thallium U 0.0600 " " "	U				0.0800	n .	Ħ	и	IJ	п
Magnesium U 0.200 " " " Manganese U 0.008 " " " Molybdenum U 0.0120 " " " Nickel U 0.0120 " " " Potassium U 0.800 " " " Selenium U 0.0500 " " " Silver U 0.0100 " " " Sodium U 0.400 " " " Strontium U 0.003 " " " Thallium U 0.0600 " " "	U				0.0300	"	H .	н	B	н
Manganese U 0.008 " " " Molybdenum U 0.0120 " " " Nickel U 0.0120 " " " Potassium U 0.800 " " " Selenium U 0.0500 " " " Silver U 0.0100 " " " Sodium U 0.400 " " " Strontium U 0.003 " " " Thallium U 0.0600 " " "	U				0.0250	n	n	И	ij	н
Molybdenum U 0.0120 " " " Nickel U 0.0120 " " " Potassium U 0.800 " " " Selenium U 0.0500 " " " Silver U 0.0100 " " " Sodium U 0.400 " " " Strontium U 0.003 " " " Thallium U 0.0600 " " "	U				0.200	"	H	н	!!	"
Nickel U 0.0120 " " " Potassium U 0.800 " " " Selenium U 0.0500 " " " Silver U 0.0100 " " " Sodium U 0.400 " " " Strontium U 0.003 " " " Thallium U 0.0600 " " "	U				0.008	п	н	и	n	n
Potassium U 0.800 " " " Selenium U 0.0500 " " " Silver U 0.0100 " " " Sodium U 0.400 " " " Strontium U 0.003 " " " Thallium U 0.0600 " " "	U				0.0120	"	H	n	"	11
Selenium	U				0.0120	"	H .	н	B	н
Silver U 0.0100 " " " Sodium U 0.400 " " " Strontium U 0.003 " " " Thallium U 0.0600 " " "	U				0.800	п	н	и	"	"
Solium	U				0.0500	п	н	н	"	"
Solution U 0.003 " " " Thallium U 0.0600 " " "	U				0.0100	н	Ħ	и	0	n
Thallium U 0.0600 " " "	U				0.400	"	"	II .	11	11
	U				0.003	n	n	И	н	н
Tin U 0.0200 " " "	U				0.0600	n	n .	В	II	II .
	U				0.0200	н	Ħ	В	IJ	n .
Titanium U 0.006 " " "	U				0.006	n	n	н	II .	В
Vanadium U 0.005 " " "	U				0.005	n	n	В	II .	н
Zinc U 0.0300 " " "	U				0.0300	n	n	н	И	п



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

A4a (1805005-10) Analyte	Matrix: Water	Sampled: Apr-30-18 09:58			Recei	ved: May-02			
		Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7.10			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	н	н	н	D	0
Arsenic	U			0.0400	п	H	Ŋ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	"
Barium	0.309			0.003	n	n	H.	II .	11
Beryllium	U			0.002	н	H	ii.		"
Boron	U			0.0500	п	н	н	"	"
Cadmium	U			0.002	п	н	н	0	0
Calcium	22.1			0.200	n	H	н	11	
Chromium	0.160			0.005	n	n	И	IJ	n.
Cobalt	0.0186			0.006	п	H	И	ıı	ıı
Copper	0.225			0.0200	н	н	н	II.	n
Iron	38.3			0.0800	п	н	И	IJ	n
Lead	U			0.0300	n	H	В	В	в
Lithium	U			0.0250	п	п	В	n	и
Magnesium	6.73			0.200	"	ři	н	"	"
Manganese	0.757			0.008	п	н	н	D	n
Molybdenum	0.0127			0.0120	п	н	n	IJ	n
Nickel	0.0673			0.0120	n	ii	В	В	в
Potassium	3.69			0.800	n	Ħ	н	II .	"
Selenium	U			0.0500	н	н	н	ij	ï
Silver	U			0.0100	п	Й	и	D	Ü
Sodium	3.25			0.400	"	"	В	II .	II .
Strontium	0.0756			0.003	n	n	И	И	н
Thallium	U			0.0600	n	n	В	"	"
Tin	U			0.0200	н	н	н	II .	n
Titanium	0.0134			0.006	n	н	н	И	16
Vanadium	0.0557			0.005	"	n	n n	ıı	II .
Zinc	0.0438			0.0300	n	n	н	н	"



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Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

A4b (1805005-11)	Matrix: Water	Samj	pled: Apr-3	30-18 10:09	Recei	ved: May-02	18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	8.64			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	n	II .	IJ	0	n
Arsenic	U			0.0400	"	H	Ŋ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	"
Barium	0.342			0.003	n .	n	n.	II.	"
Beryllium	U			0.002	11	H	ii	H	II.
Boron	U			0.0500	11	н	11	"	"
Cadmium	U			0.002	н	н	n	D	0
Calcium	17.0			0.200	"	H	y	19	
Chromium	0.208			0.005	n	n	H	ij	n.
Cobalt	0.0135			0.006	н	H	Ŋ	B	ıı
Copper	0.132			0.0200	н	н	ij	n.	n
Iron	30.7			0.0800	н	ii	й	IJ	n
Lead	U			0.0300	н	H	н	В	н
Lithium	U			0.0250	п	п	И	И	и
Magnesium	7.30			0.200	11	H	11	11	"
Manganese	1.45			0.008	п	н	н	D	n
Molybdenum	U			0.0120	н	H	и	19	n
Nickel	0.0506			0.0120	н	ii	H	В	н
Potassium	3.74			0.800	п	n	н	II	n .
Selenium	U			0.0500	н	н	ij	II .	n
Silver	U			0.0100	н	н	и	D	n
Sodium	2.56			0.400	"	"	II .	II	"
Strontium	0.138			0.003	n	n	И	В	н
Thallium	U			0.0600	11	n	И	II .	"
Tin	U			0.0200	н	н	ij	II .	n
Titanium	0.0298	J		0.006	n	н	и	15	15
Vanadium	0.0399			0.005	n	n	U	II.	п
Zinc	0.0830			0.0300	n	n	н	II.	II.



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Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

B1a (1805005-12)	Matrix: Water	Samp	oled: Apr-	30-18 10:51	Recei	ved: May-02-	18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Unîts	Dilution	Batch	Prepared	Analyzed
Aluminum	3.23			0.200	mg/L	l	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	n	II .	n	0	n
Arsenic	U			0.0400	"	"	n	"	"
Barium	0.213			0.003	"	"	II .	"	II .
Beryllium	U			0.002	n	"	'n	18	п
Boron	U			0.0500	n n	"	n	"	"
Cadmium	U			0.002	н	н	и	n	n
Calcium	50.1			0.200	н	H	Ŋ	19	15
Chromium	0.0737			0.005	п	n	И	ij	и
Cobalt	0.0076			0.006	11	Ħ	В	B	n
Copper	0.116			0.0200	н	н	п	11	n
Iron	31.2			0.0800	н	н	и	IJ	n
Lead	U			0.0300	н	Ħ	н	В	В
Lithium	U			0.0250	н	п	В	И	н
Magnesium	27.2			0.200	п	Ħ	п	"	"
Manganese	0.963			0.008	п	н	п	n	n
Molybdenum	U			0.0120	п	Ħ	В	Ŋ	В
Nickel	0.0299			0.0120	н	ii	В	В	В
Potassium	2.14			0.800	н	n	В	II	n .
Selenium	U			0.0500	н	н	В	II	II .
Silver	U			0.0100	п	Й	n	D	D
Sodium	2.75			0.400	"	"	II .	II	н
Strontium	0.0573			0.003	n	n	н	В	п
Thallium	U			0.0600	n	"	п	"	"
Tin	U			0.0200	п	н	п	n .	n
Titanium	0.0144			0.006	n	n	И	15	
Vanadium	0.0200			0.005	"	"	II .	II.	н
Zinc	0.0663			0.0300	n	n	И	II.	н



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77 West Jackson Boulevard Project Number: CB022018
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Reported: May-29-18 10:55

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Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

B1b (1805005-13)	Matrix: Water	Samp	oled: Apr-	30-18 10:58	Recei	ved: May-02	-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	8.26			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	"	H .	n	0	n
Arsenic	U			0.0400	"	"	ı,	11	"
Barium	0.605			0.003	"	"	"	"	"
Beryllium	0.0023			0.002	"	"	И	II.	"
Boron	U			0.0500	п	н	11	"	"
Cadmium	U			0.002	п	н	1)	D	0
Calcium	28.6			0.200	n .	н	н	Ŋ	11
Chromium	0.358			0.005	п	n	И	И	п
Cobalt	0.0312			0.006	н	н	n	В	n
Copper	0.498			0.0200	н	н	n	"	n
Iron	88.9			0.0800	н	н	n	IJ	n
Lead	U			0.0300	п	н	н	В	н
Lithium	U			0.0250	п	н	И	И	н
Magnesium	9.79			0.200	n	ři	В	11	"
Manganese	0.913			0.008	п	н	ıı	D	n
Molybdenum	0.0260			0.0120	н	н	ıı	IJ	n
Nickel	0.109			0.0120	п	ii	н	В	н
Potassium	5.17			0.800	n	n	В	II	n
Selenium	U			0.0500	н	н	n	II	n
Silver	U			0.0100	н	Й	ıı	D	n
Sodium	3.50			0.400	"	"	n	II .	"
Strontium	0.103			0.003	n	n	И	В	н
Thallium	U			0.0600	n	H	В	II	"
Tin	U			0.0200	н	н	n	II .	"
Titanium	0.0217			0.006	"	n	н	15	16
Vanadium	0.0966			0.005	n	"	n	И	н
Zinc	0.226			0.0300	n	n	11	н	11



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Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

B2a (1805005-14)	Matrix: Water	Samı	oled: Apr-	30-18 11:40	Receiv	ved: May-02-	-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	4.87			0.200	mg/L	l	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	H	"	IJ	0	"
Arsenic	U			0.0400	"	"	n	"	"
Barium	0.318			0.003	"	"	"	"	"
Beryllium	U			0.002	н	H	n	II .	n.
Boron	U			0.0500	н	н	n	"	"
Cadmium	U			0.002	н	н	11	D	0
Calcium	52.0			0.200	H	н	н	19	15
Chromium	0.250			0.005	n	н	И	н	n
Cobalt	0.0149			0.006	н	н	11	и	n.
Copper	0.0849			0.0200	н	н	IJ	n.	"
Iron	82.4			0.0800	н	н	IJ	n	"
Lead	U			0.0300	н	н	H	В	11
Lithium	U			0.0250	п	н	II .	н	ıı
Magnesium	25.8			0.200	н	В	13	11	"
Manganese	1.59			0.008	н	н	n	n	D
Molybdenum	0.0215			0.0120	н	н	IJ	11	"
Nickel	0.0957			0.0120	н	н	H	В	11
Potassium	5.76			0.800	н	н	n	II .	"
Selenium	U			0.0500	н	н	n	"	"
Silver	U			0.0100	п	п	n	n	n
Sodium	5.05			0.400	n	"	"	"	"
Strontium	0.0848			0.003	n	n	11	н	п
Thallium	U			0.0600	n	н	р	"	"
Tin	U			0.0200	п	н	10	"	"
Titanium	0.0399			0.006	н	n n	n	19	11
Vanadium	0.0179			0.005	n	H	IJ	II .	11
Zinc	0.0792			0.0300	n	п	II .	В	II.



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536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

B2b (1805005-15)	Matrix: Water	Samp	oled: Apr-	30-18 11:48	Receiv	ved: May-02-	18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	14.6			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	н	H .	n	"	"
Arsenic	U			0.0400	"	"	n	"	"
Barium	0.394			0.003	"	"	II .	"	"
Beryllium	U			0.002	н	H	н	B.	n.
Boron	U			0.0500	н	н	n	"	"
Cadmium	U			0.002	н	н	и	0	0
Calcium	11.1			0.200	н	н	В	19	15
Chromium	0.289			0.005	п	n	В	И	n
Cobalt	0.0161			0.006	н	н	р	II	n.
Copper	0.124			0.0200	н	н	n	"	"
Iron	39.1			0.0800	н	н	п	IJ	"
Lead	U			0.0300	п	n .	В	В	11
Lithium	U			0.0250	п	н	В	II.	ıı
Magnesium	4.22			0.200	н	H	В	11	"
Manganese	0.553			0.008	н	н	и	n	D
Molybdenum	0.0165			0.0120	н	н	n	IJ	"
Nickel	0.0536			0.0120	п	n	В	в	11
Potassium	3.05			0.800	н	н	В	II .	"
Selenium	U			0.0500	н	н	п	II .	"
Silver	U			0.0100	п	п	n	n	n
Sodium	2.17			0.400	"	"	n	"	"
Strontium	0.0454			0.003	n	n	н	и	п
Thallium	U			0.0600	"	"	h	"	"
Tin	U			0.0200	п	н	n	"	"
Titanium	0.0642			0.006	n	n .	н		11
Vanadium	0.0309			0.005	n	n	n n	II .	11
Zinc	0.0893			0.0300	n	n	н	И	II.



Chicago Regional Laboratory

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Water Division, WECA Region 5ProjectCentral Sands77 West Jackson BoulevardProject Number:CB022018Chicago IL, 60604Project Manager:Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Antimony U 0,0000	B3a (1805005-16)	Matrix: Water	Samı	pled: Apr-3	30-18 12:29	Recei	ved: May-02-	18 09:55		
Antimony U 0,0000 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Analyte	Result		MDL		Units	Dilution	Batch	Prepared	Analyzed
Assenice	Aluminum	9.09			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Barium	Antimony	U			0.0200	н	н	11	0	0
Bervillium U 0,0050 ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	Arsenic	U			0.0400	"	H	Ŋ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11
Born	Barium	0.350			0.003	n	n	H	H	II.
Cadmin	Beryllium	U			0.002	H	H	и	H	n.
Calcium 36.3 0.200 "	Boron	U			0.0500	н	н	н	"	"
Chromium 0.220 0.040 0.040 0.006 0.020 0.020 0.020 0.020 0.020 0.030 0.	Cadmium	U			0.002	н	н	н	n	0
Cobalt 0.0440 0.006 "	Calcium	36.3			0.200	н	н	н	Ŋ	ıı
Copper 0.129 0.0200 "	Chromium	0.220			0.005	n	n	И	И	n .
Iron	Cobalt	0.0440			0.006	н	н	н	В	n
Iron 35.0 0.0800 " <t< td=""><td>Copper</td><td>0.129</td><td></td><td></td><td>0.0200</td><td>н</td><td>н</td><td>n</td><td>"</td><td>"</td></t<>	Copper	0.129			0.0200	н	н	n	"	"
Lithium U 0.0250 " <t< td=""><td>Iron</td><td>35.0</td><td></td><td></td><td>0.0800</td><td>н</td><td>н</td><td>п</td><td>n .</td><td>11</td></t<>	Iron	35.0			0.0800	н	н	п	n .	11
Magnesium 8.67 0.200 "	Lead	U			0.0300	н	n .	н	В	II .
Manganese 3.56 0.008 "	Lithium	U			0.0250	п	n	II .	н	11
Molybdenum 0.0146 0.0120 "	Magnesium	8.67			0.200	н	н	п	IJ	"
Nickel 0.0658 0.0120 "	Manganese	3.56			0.008	н	н	и	D	0
Potassium 3.76 0.800 "	Molybdenum	0.0146			0.0120	n	n .	n	"	"
Sclenium U 0.0500 " <	Nickel	0.0658			0.0120	н	n .	н	В	II .
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>3.76</td><td></td><td></td><td>0.800</td><td>н</td><td>н</td><td>В</td><td>II .</td><td>"</td></th<>	Potassium	3.76			0.800	н	н	В	II .	"
Sodium 4.13 0.400 " <	Selenium	U			0.0500	н	н	п	II .	"
Stortium 0.237 0.003 "	Silver	U			0.0100	н	н	n	0	1)
Thallium U 0.0600 " <	Sodium	4.13			0.400	n	"	n .	II	"
Tin U 0.0200 "<	Strontium	0.237			0.003	n	n	н	В	11
Titanium 0.0181 0.006 "	Thallium	U			0.0600	п	n n	В	"	"
Vanadium 0.0276 0.005 " " " " " "	Tin	U			0.0200	н	н	п	n .	"
vanadum 0.0270 0.000	Titanium	0.0181			0.006	n	n	9	15	15
Zinc 0.106 0.0300 " " " " "	Vanadium	0.0276			0.005	n	"	n n	II.	II .
	Zinc	0.106			0.0300	n	n	н	II.	n.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

B3b (1805005-17)	Matrix: Water		ampled: Apr-30-18 12:36		Received: May-02-18 09:55				
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	15.3			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	"	н	11	n	"
Arsenic	U			0.0400	"	"	'n	"	"
Barium	0.637			0.003	"	"	"	"	"
Beryllium	U			0.002	"	n	ii	II.	"
Boron	U			0.0500	"	н	"	"	"
Cadmium	U			0.002	"	H	11	0	"
Calcium	12.1			0.200	n.	"	"	"	"
Chromium	0.543			0.005	"	n	IJ	II.	"
Cobalt	0.0362			0.006	n	!!	h	ii	"
Copper	0.258			0.0200	н	н	n	"	"
Iron	87.1			0.0800	п	н	n	n .	n
Lead	\mathbf{U}			0.0300	"	n .	n	11	"
Lithium	U			0.0250	n	n	"	II.	"
Magnesium	2.91			0.200	n .	н	11	"	"
Manganese	2.23			0.008	n	н	u	n	n
Molybdenum	0.0207			0.0120	"	н	"	n	"
Nickel	0.114			0.0120	"	n .	n	11	"
Potassium	5.97			0.800	"	n	Ŋ	"	"
Selenium	U			0.0500	"	H	11	"	"
Silver	U			0.0100	n	н	n	n	n
Sodium	3.14			0.400	"	"	"	"	"
Strontium	0.103			0.003	n	n	11	н	п
Thallium	U			0.0600	"	n	Ŋ	"	"
Tin	U			0.0200	n	н	n	"	"
Titanium	0.0437			0.006	n	II.	n	II.	"
Vanadium	0.0176			0.005	n	n .	IJ	II.	11
Zinc	0.201			0.0300	n	п	И	н	В



Chicago Regional Laboratory

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Water Division, WECA Region 5Project: Central Sands77 West Jackson BoulevardProject Number: CB022018Reported:Chicago IL, 60604Project Manager: Cheryl BurdettMay-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Antimony U 0,0000 ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	B4a (1805005-18)	Matrix: Water	Samı	oled: Apr-3	80-18 13:10	Receiv	ved: May-02-	18 09:55		
Antimony U 0,0000 " 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Analyte	Result		MDL		Units	Dilution	Batch	Prepared	Analyzed
Assenice	Aluminum	1.44			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Barium 0.289 0.003	Antimony	U			0.0200	н	н	11	0	0
Bervillium	Arsenic	U			0.0400	"	H	Ŋ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11
Born	Barium	0.289			0.003	n	n	H	H	II.
Cadmium	Beryllium	U			0.002	11	H	и	H	n.
Calcium 95.7 0.200 "	Boron	0.0596			0.0500	н	н	н	"	"
Chromium 0.0720 0.0801 0.0050 0.0549 0.00000 0.0000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.000000	Cadmium	U			0.002	н	н	н	n	0
Cobalt 0.0241 0.006 "	Calcium	95.7			0.200	n .	н	н	Ŋ	ıı
Copper 0.0549 0.0200 "	Chromium	0.0720			0.005	п	n	В	И	n .
Tron	Cobalt	0.0241			0.006	н	н	н	В	n
Iron 19.0 0.0800 " <t< td=""><td>Copper</td><td>0.0549</td><td></td><td></td><td>0.0200</td><td>н</td><td>н</td><td>n</td><td>"</td><td>"</td></t<>	Copper	0.0549			0.0200	н	н	n	"	"
Lithium U 0.0250 " <t< td=""><td>Iron</td><td>19.0</td><td></td><td></td><td>0.0800</td><td>н</td><td>н</td><td>п</td><td>n .</td><td>11</td></t<>	Iron	19.0			0.0800	н	н	п	n .	11
Magnesium 34.5 0.200 "	Lead	U			0.0300	n	n .	н	В	II .
Manganese 4.04 0.008 "	Lithium	U			0.0250	n	n	II .	н	11
Molybdenum 0.0128 0.0120 "	Magnesium	34.5			0.200	н	н	п	IJ	"
Nickel 0.0526 0.0120 "	Manganese	4.04			0.008	н	н	и	D	0
Potassium 3.85 9.800 "	Molybdenum	0.0128			0.0120	n	n .	n	"	"
Sclenium U 0.0500 " <	Nickel	0.0526			0.0120	n	n .	н	В	II .
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>3.85</td><td></td><td></td><td>0.800</td><td>н</td><td>н</td><td>В</td><td>II .</td><td>"</td></th<>	Potassium	3.85			0.800	н	н	В	II .	"
Sodium 11.7 0.400 " <	Selenium	U			0.0500	н	н	п	II .	"
Stortium 0.478 0.003 "	Silver	U			0.0100	н	н	n	0	1)
Thallium U 0.0600 " <	Sodium	11.7			0.400	"	"	n .	II	"
Tin U 0.0200 "<	Strontium	0.478			0.003	n	n	н	В	11
Titanium 0.0173 0.006 "	Thallium	U			0.0600	n	n n	В	"	"
Vanadium U 0.005 " " " " "	Tin	U			0.0200	н	н	п	n .	"
variation C	Titanium	0.0173			0.006	n	n	9	15	15
Zinc 0.0418 0.0300 " " " " "	Vanadium	U			0.005	n	"	n n	II.	II .
	Zinc	0.0418			0.0300	n	n	н	II.	n.



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

B4b (1805005-19)	Matrix: Water	Samp	oled: Apr-	30-18 13:41	Recei	ved: May-02	-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7.92			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	H	H .	n	0	n
Arsenic	U			0.0400	"	"	ı,	11	"
Barium	0.268			0.003	"	"	"	"	"
Beryllium	U			0.002	n	"	И	II.	"
Boron	0.0626			0.0500	н	н	11	"	"
Cadmium	U			0.002	н	н	1)	D	0
Calcium	73.3			0.200	H	н	н	Ŋ	11
Chromium	0.682			0.005	n	n	И	И	п
Cobalt	0.0178			0.006	н	н	'n	В	n
Copper	0.216			0.0200	н	н	n	"	n
Iron	93.4			0.0800	н	н	n	IJ	n
Lead	U			0.0300	н	н	н	В	н
Lithium	U			0.0250	п	н	И	И	н
Magnesium	23.4			0.200	#	ři	В	11	"
Manganese	1.80			0.008	н	н	ıı	D	n
Molybdenum	0.0388			0.0120	н	н	ıı	IJ	n
Nickel	0.140			0.0120	н	ii	н	В	н
Potassium	16.0			0.800	H	n	В	II	n
Selenium	U			0.0500	н	н	n	II	n
Silver	U			0.0100	н	Й	ıı	D	n
Sodium	10.8			0.400	"	"	n	II .	"
Strontium	0.214			0.003	n	n	И	В	н
Thallium	U			0.0600	n	n	В	II .	"
Tin	U			0.0200	н	н	n	II .	n
Titanium	0.0363			0.006	n	н	н	15	11
Vanadium	0.0149			0.005	n	n	n	II.	н
Zinc	0.247			0.0300	n	n	11	н	11



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77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C1a (1805005-20)	Matrix: Water		Sampled: Apr-30-18 15:02		Received: May-02-18 09:55				
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	9.08			0.200	mg/L	1	B18E013	May-08-18	May-09-18
Antimony	U			0.0200	н	н	IJ	n	n
Arsenic	U			0.0400	n	"	ij	15	11
Barium	0.329			0.003	"	n .	"	H	н
Beryllium	U			0.002	н	н	Įį.	И	и
Boron	U			0.0500	n	"	II	"	"
Cadmium	U			0.002	"	n	"	n	"
Calcium	13.3			0.200	"	н	ij	19	"
Chromium	0.0804			0.005	n	"	II.	"	II.
Cobalt	0.0406			0.006	"	N	II	H	"
Copper	0.0528			0.0200	n	н	1)	"	"
Iron	14.0			0.0800	n	н	n	II.	11
Lead	U			0.0300	"	n .	H	II .	"
Lithium	U			0.0250	n	n	U	H.	11
Magnesium	2.74			0.200	"	н	IJ	"	"
Manganese	1.15			0.008	n	н	n	n	1)
Molybdenum	U			0.0120	"	N	n	"	"
Nickel	0.0266			0.0120	n	н	H	н	#
Potassium	2.18			0.800	n	н	n	II	"
Selenium	U			0.0500	n	н	n	II .	"
Silver	U			0.0100	п	н	п	n	11
Sodium	1.90			0.400	"	n .	IJ	II .	"
Strontium	0.0967			0.003	n	n	H	н	Ħ
Thallium	U			0.0600	n	n n	p	"	"
Tin	U			0.0200	н	н	IJ	11	n
Titanium	0.0401			0.006	н	н	и	н	16
Vanadium	0.0226			0.005	п	н	IJ	И	н
Zinc	0.0307			0.0300	n	п	H	н	н



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77 West Jackson Boulevard Project Number: CB022018
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Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Antimony U 0,0000 ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	C1b (1805005-21)	Matrix: Water	Samp	pled: Apr-3	30-18 15:27	Recei	ved: May-02	-18 09:55		
Antimony U 0,0000 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Analyte			MDL		Units	Dilution	Batch	Prepared	Analyzed
Assenice U	Aluminum	15.8			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Barium 1.22 0.003 1 1 1 1 1 1 1 1 1	Antimony	U			0.0200	н	н	и	n	n
Bervillion	Arsenic	\mathbf{U}			0.0400	!!	H	Ŋ	19	11
Born U	Barium	1.22			0.003	n	n	n .	H	II.
Cadmin	Beryllium	U			0.002	н	H	н	II .	n.
Calcium 21.2 0.200 """"""""""""""""""""""""""""""""""""	Boron	U			0.0500	н	н	n	"	"
Chromium 0.0667 0.005 0.0005 0.0006 0.0005 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.000000	Cadmium	U			0.002	н	н	и	D	n
Cobalt 0.6633 0.006 "	Calcium	21.2			0.200	н	H	В	19	May-14-18
Copper 0.0505 0.0200 "	Chromium	0.0667			0.005	n	n	И	II.	May-09-18
Tion 13.4 0.8800 " " " " " " " " "	Cobalt	0.0603			0.006	н	H	В	II.	n
Tron	Copper	0.0505			0.0200	н	н	п	11	"
Lithium U 0.0250 " <t< td=""><td>Iron</td><td>13.4</td><td></td><td></td><td>0.0800</td><td>н</td><td>ii</td><td>IJ</td><td>n</td><td>n</td></t<>	Iron	13.4			0.0800	н	ii	IJ	n	n
Magnesium 5.35 0.200 "	Lead	U			0.0300	н	H	В	н	В
Magnese 1.87 0.008 " May-14-18 May-14-18 Potassium 2.79 0.800 " " " " May-09-18 Selenium U 0.0500 " " " " May-09-18 Selenium U 0.0500 " " " " May-09-18 May-09-18 Selenium " <	Lithium	U			0.0250	н	п	В	н	п
Molybdenum U 0.0120 " " " " May-14-18 Nickel 0.0231 0.0120 " " " May-14-18 Potassium 2.79 0.800 " " " " May-09-18 Selenium U 0.0500 " " " " " May-09-18 Silver U 0.0100 "	Magnesium	5.35			0.200	H	H	В	11	"
Nickel 0.0231 0.0120 " " " May-14-18 Potassium 2.79 0.800 " " " " May-09-18 Selenium U 0.0500 "	Manganese	1.87			0.008	н	н	п	n	n
Potassium 2.79 0.800 " " " May-09-18 Selenium U 0.0500 "	Molybdenum	U			0.0120	н	H	IJ	11	n
Selenium U 0.0500 " <	Nickel	0.0231			0.0120	н	ii	В	н	May-14-18
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>2.79</td><td></td><td></td><td>0.800</td><td>n</td><td>n</td><td>В</td><td>11</td><td>May-09-18</td></th<>	Potassium	2.79			0.800	n	n	В	11	May-09-18
Sodium 2.57 0.400 " <	Selenium	U			0.0500	н	н	В	"	n n
Stontium 0.116 0.003 "	Silver	U			0.0100	н	н	и	n	0
Thallium U 0.0600 " <	Sodium	2.57			0.400	n	"	n n	11	II .
Tin U 0.0200 "<	Strontium	0.116			0.003	n	n	И	н	н
Titanium 0.0810 J 0.006 "	Thallium	U			0.0600	n	n	В	"	"
Vanadium 0.0482 0.005 " " " " " "	Tin	U			0.0200	н	н	В	"	n n
vanadum 0.0462 0.000	Titanium	0.0810	J		0.006	н	н	В	11	15
Zinc 0.0583 0.0300 " " " " "	Vanadium	0.0482			0.005	n	n	В	II .	II .
	Zinc	0.0583			0.0300	n	n	н	II.	11



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C2a (1805005-22)	Matrix: Water		Sampled: Apr-30-18 16:06		Received: May-02-18 09:55				
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	4.65			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Antimony	U			0.0200	n	н	IJ	n	0
Arsenic	U			0.0400	"	,,	ij	15	11
Barium	0.348			0.003	"	"	ii	II	"
Beryllium	U			0.002		н	Įį.	В	II
Boron	0.0770			0.0500	"	II .	"	"	"
Cadmium	U			0.002	"	н	"	0	"
Calcium	49.4			0.200	"	H	ij	"	May-14-18
Chromium	0.0718			0.005	n	n	U	II.	May-09-18
Cobalt	0.0217			0.006	11	H	P	li i	li .
Copper	0.0462			0.0200	н	н	IJ	"	"
Iron	12.9			0.0800	n	н	n	n .	"
Lead	U			0.0300	n .	H	Ħ	В	11
Lithium	U			0.0250	n	n	U	H	n.
Magnesium	18.1			0.200	n	H	IJ	"	"
Manganese	4.01			0.008	п	н	n	n	1)
Molybdenum	U			0.0120	"	N	n	"	"
Nickel	0.0283			0.0120	n .	H	Ħ	В	May-14-18
Potassium	17.6			0.800	n	п	n	"	May-09-18
Selenium	U			0.0500	п	H	11	"	"
Silver	U			0.0100	п	н	n	n	n
Sodium	7.26			0.400	n .	n n	11	II II	"
Strontium	0.617			0.003	n	n	N	H	n.
Thallium	U			0.0600	n	n	p	"	"
Tin	U			0.0200	п	Ħ	n	"	"
Titanium	0.0249			0.006	n	н	и	В	11
Vanadium	0.0063			0.005	n	n .	IJ	II	"
Zinc	0.0301			0.0300	n	п	H	н	п



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Antimony U 0,0000	C2b (1805005-23)	Matrix: Water	Samp	npled: Apr-30-18 16:14		Received: May-02-18 09:55				
Antimony U 0.0200 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 3 3 4 3 3 3 4 3 3 4 3 3 4 3 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4 <	Analyte	Result		MDL		Units	Dilution	Batch	Prepared	Analyzed
Assenice	Aluminum	16.6			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Barium 0.882 0.003 ' ' ' ' Beryllium U 0.002 ' ' ' ' Bron U 0.0500 ' ' ' ' Cadmium U 0.002 ' ' ' ' ' ' May-14-18 Calcium 1.47 0.2020 ' ' ' May-14-18 Chromium 0.335 0.005 ' ' ' May-14-18 Cobalt 0.611 0.006 ' ' ' May-14-18 Cobalt 0.611 0.006 ' ' ' May-14-18 Cobalt 0.611 0.006 ' ' ' May-14-18 Cobalt 0.612 0.006 '	Antimony	U			0.0200	n	н	11	n	n
Bervillium U 0,0050 ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	Arsenic	U			0.0400	"	H	19	19	11
Boron U 0.000	Barium	0.882			0.003	n .	n	IJ	H	II.
Cadmins U 0.002 " <th< td=""><td>Beryllium</td><td>U</td><td></td><td></td><td>0.002</td><td>11</td><td>H</td><td>п</td><td>II.</td><td>n.</td></th<>	Beryllium	U			0.002	11	H	п	II.	n.
Calcium 14.7 0.200 " " May-14-18 Chromium 0.395 0.005 " " " May-09-18 Cobalt 0.0611 0.006 "	Boron	U			0.0500	11	н	11	"	"
Chromium Olivorium O	Cadmium	U			0.002	н	н	13	n	0
Cobalt 0.0611 0.006 "	Calcium	14.7			0.200	н	н	н	19	May-14-18
Copper 0.187 0.0200 "	Chromium	0.395			0.005	п	n	И	н	May-09-18
Tion	Cobalt	0.0611			0.006	н	н	n	и	n.
Iron 53.9 0.0800 " <t< td=""><td>Copper</td><td>0.187</td><td></td><td></td><td>0.0200</td><td>н</td><td>н</td><td>n</td><td>n.</td><td>"</td></t<>	Copper	0.187			0.0200	н	н	n	n.	"
Lithium U 0.0250 " <t< td=""><td>Iron</td><td>53.9</td><td></td><td></td><td>0.0800</td><td>н</td><td>н</td><td>n</td><td>n</td><td>11</td></t<>	Iron	53.9			0.0800	н	н	n	n	11
Magnesium 5.02 0.200 "	Lead	U			0.0300	n	n .	н	н	II .
Magness 9.53 0.008 " May-14-18 May-14-18 May-14-18 May-09-18 Selenium U 0.0500 " " " " May-09-18 Selenium U 0.0500 " " " " May-09-18 Selenium U 0.0100 " " " " May-09-18 Selenium U 0.0100 "	Lithium	U			0.0250	n	n	и	н	II .
Molybdenum 0.0234 0.0120 " " " " " May-14-18 Nickel 0.107 0.0120 " " " " May-14-18 Potassium 8.67 0.800 " " " " May-09-18 Selenium U 0.0500 " " " " " " " " May-09-18 Silver U 0.0500 "<	Magnesium	5.02			0.200	н	н	n	"	"
Nickel 0.107 0.0120 " " " " May-14-18 Potassium 8.67 0.800 " " " " May-09-18 Selenium U 0.0500 "	Manganese	9.53			0.008	н	н	n	n	0
Potassium 8.67 0.800 " " " May-09-18 Selenium U 0.0500 "	Molybdenum	0.0234			0.0120	n	n .	n	"	"
Selenium U 0.0500 " <	Nickel	0.107			0.0120	n	n	н	н	May-14-18
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>8.67</td><td></td><td></td><td>0.800</td><td>"</td><td>n</td><td>ŋ</td><td>"</td><td>May-09-18</td></th<>	Potassium	8.67			0.800	"	n	ŋ	"	May-09-18
Sodium 4.07 0.400 " <	Selenium	U			0.0500	п	n	II.	"	"
Stontium 0.133 0.003 "	Silver	U			0.0100	п	п	n	n	0
Strontium 0.133 0.003 "	Sodium	4.07			0.400	"	"	n	"	"
Tin U 0.0200 "<	Strontium	0.133			0.003	n	n	11	н	11
Titanium 0.0374 0.006 "	Thallium	U			0.0600	"	n .	p	"	"
Vanadium 0.0083 0.005 " " " " " "	Tin	U			0.0200	n	п	n	"	"
Vanadium 0.0083 0.005 " " " " " "	Titanium	0.0374			0.006	n	H	19	"	"
	Vanadium	0.0083			0.005	n	n	II.	II .	n .
	Zinc	0.0886			0.0300	n	n	и	н	н



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Antimony U 0,0000 " 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	C3a (1805005-24)	Matrix: Water	Samp	pled: Apr-	30-18 14:16	Received: May-02-18 09:55				
Antimony U 0,0200 1 2 4 Arsenic U 0,0400 2 3 4 5 4 Barium 0,670 0,033 2 3 4 5 5 Beryllim U 0,002 2 3 4 5 5 Cadmium U 0,002 2 3 4 6 6 7 Calcium 57.9 0,200 2 3 4 5 1	Analyte	Result		MDL		Unîts	Dilution	Batch	Prepared	Analyzed
Arsenice	Aluminum	5.94			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Barium	Antimony	U			0.0200	н	н	11	n	n
Bervillium U 0.002 ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	Arsenic	U			0.0400	"	H	19	19	11
Born U 0.0500 "	Barium	0.670			0.003	n	n	IJ	H	"
Cadmium	Beryllium	U			0.002	11	H	п	II.	n.
Calcium 57.9 0.200 " " May-14-18 Chromium 0.260 0.005 " " " May-09-18 Cobalt 0.0452 0.006 "	Boron	U			0.0500	н	н	11	"	"
Chromium 0.260 0.005 " " " May-09-18 Cobalt 0.0452 0.006 " " " " May-09-18 Copper 0.157 0.0200 " " " " " Iron 31.9 0.0800 " " " " " Lead U 0.0300 " " " " " Magnesium U 0.0250 " " " " " Magnesium 10.1 0.0200 " " " " " " Magnesium U 0.0220 " May-14-18 " " " " May-14-18 " " "	Cadmium	U			0.002	н	н	13	n	0
Cobalt 0.0452 0.006 "	Calcium	57.9			0.200	н	н	н	19	May-14-18
Copper 0.157 0.0200 "	Chromium	0.260			0.005	n	n	И	н	May-09-18
No. 1.00 31.9 0.0800 0 0 0 0 0 0 0 0 0	Cobalt	0.0452			0.006	н	н	n	и	n .
Iron 31.9 0.0800 " <t< td=""><td>Copper</td><td>0.157</td><td></td><td></td><td>0.0200</td><td>н</td><td>н</td><td>n</td><td>n.</td><td>"</td></t<>	Copper	0.157			0.0200	н	н	n	n.	"
Lithium U 0.0250 " <t< td=""><td>Iron</td><td>31.9</td><td></td><td></td><td>0.0800</td><td>н</td><td>н</td><td>n</td><td>n</td><td>11</td></t<>	Iron	31.9			0.0800	н	н	n	n	11
Magnesium 10.1 0.200 "	Lead	U			0.0300	н	n .	н	н	II.
Magness 14.3 0.008 " May-14-18 May-14-18 Potassium 4.24 0.800 " " " " May-09-18 Selenium U 0.0500 " " " " May-09-18 Selenium U 0.0500 " " " " May-09-18 Selenium U 0.0100 "	Lithium	U			0.0250	п	n	и	н	II .
Molybdenum U 0.0120 " " " " " " May-14-18 Nickel 0.0849 0.0120 " " " " May-14-18 Potassium 4.24 0.800 " " " " May-09-18 Selenium U 0.0500 " " " " " May-09-18 Silver U 0.0100 "	Magnesium	10.1			0.200	н	н	n	"	"
Nickel 0.0849 0.0120 " " " " May-14-18 Potassium 4.24 0.800 " " " " May-09-18 Selenium U 0.0500 "	Manganese	14.3			0.008	н	н	n	n	0
Potassium 4.24 0.800 " " " May-09-18 Selenium U 0.0500 "	Molybdenum	U			0.0120	n	n .	n	"	"
Selenium U 0.0500 " <	Nickel	0.0849			0.0120	н	n .	н	н	May-14-18
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>4.24</td><td></td><td></td><td>0.800</td><td>н</td><td>н</td><td>В</td><td>II .</td><td>May-09-18</td></th<>	Potassium	4.24			0.800	н	н	В	II .	May-09-18
Sodium 4.60 0.400 " <	Selenium	U			0.0500	н	н	n	"	"
Stontium 0.506 0.003 "	Silver	U			0.0100	н	н	n	n	1)
Thallium U 0.0600 " <	Sodium	4.60			0.400	n	"	u	"	"
Tin U 0.0200 "<	Strontium	0.506			0.003	n	n	11	н	11
Titanium 0.0449 0.006 "	Thallium	U			0.0600	п	n n	р	"	"
Vanadium 0.0089 0.005 " " " " " "	Tin	U			0.0200	н	н	n	"	"
vanadum 0.0009 0.0005	Titanium	0.0449			0.006	n	n	n	11	15
Zinc 0.120 0.0300 " " " "	Vanadium	0.0089			0.005	n	"	II .	II.	"
	Zinc	0.120			0.0300	n	n	U	II.	n.



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C3b (1805005-25)	Matrix: Water	Matrix: Water Sampled: Ap		30-18 14:26	Received: May-02-18 09:55				
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	3.21			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Antimony	U			0.0200	"	H	11	n	n
Arsenic	U			0.0400	"	N.	ij	"	"
Barium	0.119			0.003	"	"	ii	II	"
Beryllium	U			0.002	n	n .	"	"	11
Boron	U			0.0500	n	N	"	"	"
Cadmium	U			0.002	"	н	11	n	"
Calcium	6.12			0.200	n	H	н	l)	May-14-18
Chromium	0.0557			0.005	n	n	U	II.	May-09-18
Cobalt	U			0.006	н	Ħ	h	it.	и
Copper	0.0277			0.0200	н	Ħ	ij	n.	11
Iron	6.76			0.0800	п	Ħ	ij	II	11
Lead	U			0.0300	п	n .	H	н	н
Lithium	U			0.0250	n	п	IJ	И	и
Magnesium	1.39			0.200	11	Ħ	19	11	"
Manganese	0.786			0.008	п	н	ıı	n	n
Molybdenum	U			0.0120	n	И	ij	IJ	В
Nickel	0.0137			0.0120	n	И	ij	В	May-14-18
Potassium	1.78			0.800	п	Ħ	р	II .	May-09-18
Selenium	U			0.0500	п	И	n	II	II .
Silver	U			0.0100	В	н	и	n	0
Sodium	3.84			0.400	"	"	IJ	И	и
Strontium	0.0451			0.003	n	n	И	н	В
Thallium	U			0.0600	н	н	p	"	"
Tin	U			0.0200	В	И	n	W.	11
Titanium	0.0131			0.006	"	и	н	н	В
Vanadium	U			0.005	"	n	ıı	И	н
Zinc	U			0.0300	n	n	И	н	В



Chicago Regional Laboratory

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Water Division, WECA Region 5ProjectCentral Sands77 West Jackson BoulevardProject Number:CB022018Chicago IL, 60604Project Manager:Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C5Aa (1805005-26)	Matrix: W	ater Sa	mpled: Ma	ay-01-18 06:29	Rec	ceived: May-	02-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	5.94			0.200	mg/L	l	B18E014	May-08-18	May-09-18
Antimony	U			0.0200	п	H	U	D	D
Arsenic	U			0.0400	"	"	Ŋ	19	
Barium	0.179			0.003	n	n .	IJ	II .	11
Beryllium	U			0.002	11	11	n	H	11
Boron	0.0797			0.0500	11	н	IJ	"	"
Cadmium	U			0.002	н	н	IJ	n	n
Calcium	67.2			0.200	11	11	и	IJ	May-14-18
Chromium	0.104			0.005	n	n	IJ	ij	May-09-18
Cobalt	0.0241			0.006	н	H	li li	ıı	n
Copper	0.0573			0.0200	н	н	n	ıı	n.
Iron	15.9			0.0800	н	II	ij	IJ	n
Lead	U			0.0300	н	н	ij	В	н
Lithium	U			0.0250	n	n	II .	II .	п
Magnesium	20.6			0.200	н	н	n	"	"
Manganese	3.86			0.008	н	н	n	D	n
Molybdenum	U			0.0120	п	n .	ii	II	11
Nickel	0.0330			0.0120	n	n	IJ	и	May-14-18
Potassium	15.5			0.800	н	н	и	"	May-09-18
Selenium	U			0.0500	н	н	II .	"	n .
Silver	U			0.0100	п	н	n	n	n
Sodium	12.2			0.400	n n	"	"	"	"
Strontium	0.138			0.003	n	n	II .	II .	н
Thallium	U			0.0600	n	"	li li	"	"
Tin	U			0.0200	н	н	II .	"	n .
Titanium	0.0417			0.006	n	n	H	15	15
Vanadium	0.0182			0.005	n	"	"	II .	"
Zinc	0.151			0.0300	n	n	U	н	п



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Antimony U 0.0000 1 2 3 1 <	C5Ab (1805005-27)	Matrix: Wat	ter Sa	mpled: Ma	ay-01-18 06:43	Rec	ceived: May-	02-18 09:55		
Antimony U 0.0200 <	Analyte	Result		MDL		Units	Dilution	Batch	Prepared	Analyzed
Assenice	Aluminum	26.7			0.200	mg/L	l	B18E014	May-08-18	May-09-18
Barium 0.399 0.003 '	Antimony	U			0.0200	н	н	IJ	n	n
Beryllium	Arsenic	U			0.0400	"	!!	н	Ŋ	16
Boron	Barium	0.399			0.003	n	н	U	И	н
Gramium 0.0002	Beryllium	U			0.002	н	H	II.	н	п
Calcium 78.4 0.200 " " May-14-18 Chromium 1.05 0.005 " " " May-09-18 Cobalt 0.0612 0.006 " " " " " May-09-18 Copper 0.430 0.0200 "	Boron	0.0660			0.0500	н	H	11	"	"
Chromium 1.05 0.005 " " " May-09-18 Cobalt 0.0612 0.006 " " " " " " " " " " " " " " " " " " "	Cadmium	0.0022			0.002	н	н	IJ	D	D
Cobalt 0.0612 0.006 "	Calcium	78.4			0.200	н	н	и	6	May-14-18
Copper 0.430 0.0200 "	Chromium	1.05			0.005	п	н	IJ	В	May-09-18
Tion 126 0.0800 " " " " " " " " "	Cobalt	0.0612			0.006	н	н	li .	н	п
Iron 126 0.0800 " <th< td=""><td>Copper</td><td>0.430</td><td></td><td></td><td>0.0200</td><td>н</td><td>н</td><td>II .</td><td>"</td><td>n n</td></th<>	Copper	0.430			0.0200	н	н	II .	"	n n
Lithium U 0.0250 " <t< td=""><td>Iron</td><td>126</td><td></td><td></td><td>0.0800</td><td>н</td><td>н</td><td>IJ</td><td>В</td><td>п</td></t<>	Iron	126			0.0800	н	н	IJ	В	п
Magnesium 31.2 0.200 "	Lead	U			0.0300	н	н	и	В	н
Magness 8.11 0.008 " May-14-18 Node " " " " May-09-18 Node " </td <td>Lithium</td> <td>U</td> <td></td> <td></td> <td>0.0250</td> <td>п</td> <td>п</td> <td>li .</td> <td>и</td> <td>п</td>	Lithium	U			0.0250	п	п	li .	и	п
Molybdenum 0.0313 0.0120 " " " " May-14-18 Nickel 0.229 0.0120 " " " May-14-18 Potassium 30.0 0.800 " " " May-09-18 Selenium U 0.0500 " " " " May-09-18 Silver U 0.0100 "<	Magnesium	31.2			0.200	н	н	n	n	n
Nickel 0.229 0.0120 " " " May-14-18 Potassium 30.0 0.800 " " " " May-09-18 Selenium U 0.0500 " " " " " " May-09-18 Silver U 0.0500 "	Manganese	8.11			0.008	н	н	n	D	D
Potassium 30.0 0.800 " " " May-09-18 Selenium U 0.0500 "	Molybdenum	0.0313			0.0120	n	н	ii .	п	п
Selenium U 0.0500 " <	Nickel	0.229			0.0120	n	н	н	В	May-14-18
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>30.0</td><td></td><td></td><td>0.800</td><td>н</td><td>н</td><td>IJ</td><td>II .</td><td>May-09-18</td></th<>	Potassium	30.0			0.800	н	н	IJ	II .	May-09-18
Sodium 21.5 0.400 " <	Selenium	U			0.0500	н	н	II.	"	n .
Strontium 0.250 0.003 "	Silver	U			0.0100	п	н	II.	n	n
Thallium U 0.0600 " <	Sodium	21.5			0.400	"	"	ıı	и	п
Tin U 0.0200 "<	Strontium	0.250			0.003	n	n	li .	н	п
Titanium 0.0598 0.006 "	Thallium	U			0.0600	н	"	IJ	"	"
Vanadium 0.0219 0.005 " " " " " " "	Tin	U			0.0200	п	н	n	"	n n
vanadum 0.0219	Titanium	0.0598			0.006	n	н	н	н	11
	Vanadium	0.0219			0.005	n	н	U	н	н
	Zinc	1.54			0.0300	n	n	H	В	В



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C6a (1805005-28)	Matrix: Water		Sampled: May-01-18 07:06		Received: May-02-18 09:55				
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	2.78			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Antimony	U			0.0200	н	н	ıı	n	0
Arsenic	U			0.0400	n	,,	ii	11	15
Barium	0.503			0.003	п	"	II .	II.	н
Beryllium	U			0.002	н	н	n	н	и
Boron	0.0590			0.0500	п	H	"	"	"
Cadmium	U			0.002	п	H	n	n	n
Calcium	105			0.200	n	H	n	"	May-14-18
Chromium	0.144			0.005	n	ii	IJ	II.	May-09-18
Cobalt	0.0248			0.006	11	H	h	ii	11
Copper	0.106			0.0200	н	н	n	"	"
Iron	21.1			0.0800	п	н	n	n .	11
Lead	U			0.0300	н	H	n	н	н
Lithium	U			0.0250	n	n	U	II .	п
Magnesium hi	47.3			0.200	п	H	IJ	"	"
Manganese	9.64			0.008	п	н	n	n	11
Molybdenum	0.0137			0.0120	н	N	"	"	11
Nickel	0.0572			0.0120	н	II .	n	н	May-14-18
Potassium	14.5			0.800	п	п	p	"	May-09-18
Selenium	U			0.0500	н	н	n	"	"
Silver	U			0.0100	н	н	n	n	11
Sodium	10.8			0.400	"	n n	"	"	"
Strontium	0.601			0.003	n	n	n	H	п
Thallium	U			0.0600	п	n	р	"	"
Tin	U			0.0200	п	Ħ	n	"	"
Titanium	0.0292			0.006	н	н	ij	11	11
Vanadium	U			0.005	п	n .	IJ	H	11
Zinc	0.0682			0.0300	п	п	И	н	В



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5Project: Central Sands77 West Jackson BoulevardProject Number: CB022018Chicago IL, 60604Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Antimony U 0,0000 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	C6b (1805005-29)	Matrix: Water	Samp	oled: May	-01-18 07:15	Received: May-02-18 09:55				
Antimony U 0,0200 * <	Analyte	Result		MDL		Units	Dilution	Batch	Prepared	Analyzed
Assenic U 0,0400 ° 0,0500 ° 0,	Aluminum	13.0			0.200	mg/L	l	B18E014	May-08-18	May-09-18
Barium	Antimony	U			0.0200	п	н	n	"	n
Bervillion U 0,002 O,0050 O,0060 O	Arsenic	U			0.0400	"	"	n	"	11
Servind	Barium	0.284			0.003	п	H .	H.	"	н
Cadmins U 0.002 ' <th< td=""><td>Beryllium</td><td>U</td><td></td><td></td><td>0.002</td><td>п</td><td>H</td><td>н</td><td>B.</td><td>п</td></th<>	Beryllium	U			0.002	п	H	н	B.	п
Calcium 56.4 0.200 " " May-14 la Chromium 0.463 0.005 " " " May-69-18 Cobalt 0.0523 0.006 " " " " " " " " " " May-69-18 Copper 0.186 0.0200 " <td>Boron</td> <td>0.0864</td> <td></td> <td></td> <td>0.0500</td> <td>н</td> <td>H</td> <td>n</td> <td>"</td> <td>"</td>	Boron	0.0864			0.0500	н	H	n	"	"
Chronium 0.463 0.005 " " May-09-18 Cobalt 0.0523 0.006 " " " May-09-18 Copper 0.186 0.0200 " " " " " " Iron 54.8 0.0800 "	Cadmium	U			0.002	н	н	и	0	n
Clobalt 0.9523 0.006 "	Calcium	56.4			0.200	п	н	В	19	May-14-18
Copper 0.186 0.0200 "	Chromium	0.463			0.005	n	n	И	ii.	May-09-18
Tron	Cobalt	0.0523			0.006	9	н	В	ıı	В
Holin 54-50 Cooler Cooler " May-14-18 " " May-14-18 " May-14-18 " " " May-14-18 " " " May-14-18 " " " " " May-14-18 " " " " " "	Copper	0.186			0.0200	п	н	п	11	n
Lithium U 0.0250 " May-14-18 " May-14-18 " " May-14-18 " May-19-18 " " " " May-19-18 May-19-18 "	Iron	54.8			0.0800	п	н	IJ	IJ	В
Magnesium 25.9 0.200 "	Lead	U			0.0300	н	н	В	В	В
Magness 10.7 0.008 " May-14-18 May-14-18 Potassium 21.2 0.800 " " " " " May-09-18 Selenium U 0.0500 " " " " May-09-18 Selenium U 0.0500 " " " " May-09-18 May-09-18 Selenium U 0.0050 "	Lithium	U			0.0250	п	н	В	и	В
Molybdenum 0.0247 0.0120 " " " " May-14-18 Nickel 0.0904 0.0120 " " " May-14-18 Potassium 21.2 0.800 " " " " May-09-18 Selenium U 0.0500 " " " " " " May-09-18 Silver U 0.0100 "	Magnesium	25.9			0.200	н	н	В	11	II .
Nickel 0.0904 0.0120 " " " May-14-18 Potassium 21.2 0.800 " " " " May-09-18 Selenium U 0.0500 "	Manganese	10.7			0.008	п	н	п	n	D
Potassium 21.2 0.800 " " " " May-09-18 Selenium U 0.0500 "	Molybdenum	0.0247			0.0120	п	н	IJ	IJ	В
Sclenium U 0.0500 " <	Nickel	0.0904			0.0120	н	н	В	В	May-14-18
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>21.2</td><td></td><td></td><td>0.800</td><td>н</td><td>н</td><td>В</td><td>IJ</td><td>May-09-18</td></th<>	Potassium	21.2			0.800	н	н	В	IJ	May-09-18
Sodium 10.3 0.400 " <	Selenium	U			0.0500	н	н	В	ij	ii .
Strontium 0.167 0.003 "	Silver	U			0.0100	н	н	n	Ü	D
Thallium U 0.0600 " <	Sodium	10.3			0.400	"	n .	В	II .	н
Tin U 0.0200 "<	Strontium	0.167			0.003	n	п	н	н	п
Titanium 0.0771 0.006 "	Thallium	U			0.0600	"	н	В	"	n n
Vanadium 0.0144 0.005 " " " " " " "	Tin	U			0.0200	п	н	п	II .	n
vanauum 0.0144 0.005	Titanium	0.0771			0.006	"	н	н	15	В
Zinc 0.164 0.0300 " " " " "	Vanadium	0.0144			0.005	"	n	II .	II .	п
	Zinc	0.164			0.0300	n	п	И	н	п



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C7a (1805005-30)	Matrix: Water		Sampled: May-01-18 07:48		Received: May-02-18 09:55				
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	2.72			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Antimony	U			0.0200	н	н	IJ	n	0
Arsenic	U			0.0400	n	H	n	15	11
Barium	0.782			0.003	n	n .	IJ	II.	"
Beryllium	U			0.002	н	н	n	В	II
Boron	U			0.0500	п	II .	n	"	"
Cadmium	U			0.002	п	II .	ıı	0	"
Calcium	138			0.200	n	"	n	"	May-14-18
Chromium	0.0871			0.005	n	"	IJ	II	May-09-18
Cobalt	0.0296			0.006	n	H	h	li i	li .
Copper	0.0937			0.0200	н	н	11	"	"
Iron	19.6			0.0800	п	н	n	n .	"
Lead	U			0.0300	п	n	19	В	11
Lithium	U			0.0250	n	n	U	H	n.
Magnesium hi	59.1			0.200	п	"	n	"	"
Manganese	9.90			0.008	п	н	и	n	0
Molybdenum	U			0.0120	п	H	li li	"	"
Nickel	0.0756			0.0120	п	H	19	В	May-14-18
Potassium	24.1			0.800	п	n	и	"	May-09-18
Selenium	U			0.0500	н	H	n	"	"
Silver	U			0.0100	н	н	1)	n	n
Sodium	4.93			0.400	"	"	"	11	"
Strontium	0.526			0.003	n	n	11	B	n.
Thallium	U			0.0600	n	"	h	"	"
Tin	U			0.0200	п	n	n	"	"
Titanium	0.0539			0.006	n	н	19	В	11
Vanadium	0.0067			0.005	"	n .	IJ	II	"
Zinc	U			0.0300	п	n	И	н	п



Chicago Regional Laboratory

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Water Division, WECA Region 5Project: Central Sands77 West Jackson BoulevardProject Number: CB022018Chicago IL, 60604Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C7b (1805005-31)	Matrix: Water	Sam	Sampled: May-01-18 08:02			Received: May-02-18 09:55			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	9.14			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Antimony	U			0.0200	"	H	11	0	n
Arsenic	U			0.0400	и	H	Ŋ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	#
Barium	0.363			0.003	"	n	H.	H	н
Beryllium	U			0.002	n	"	и	II.	n
Boron	0.0811			0.0500	11	II II	n	"	"
Cadmium	U			0.002	н	н	н	D	n
Calcium	81.6			0.200	п	H	н	Ŋ	May-14-18
Chromium	0.744			0.005	п	n	и	и	May-09-18
Cobalt	0.0397			0.006	н	н	н	В	п
Copper	0.267			0.0200	н	н	п	n	п
Iron	91.4			0.0800	п	ii	и	n	В
Lead	U			0.0300	n	н	В	н	В
Lithium	U			0.0250	n	n	н	В	н
Magnesium	36.6			0.200	н	H	В	II	n
Manganese	11.6			0.008	п	н	и	n	D
Molybdenum	0.0413			0.0120	н	н	и	n	В
Nickel	0.169			0.0120	n	n .	н	В	May-14-18
Potassium	24.1			0.800	n	n	9	II .	May-09-18
Selenium	U			0.0500	п	n	n	"	n n
Silver	U			0.0100	п	п	n	n	n
Sodium	13.0			0.400	"	"	11	II	п
Strontium	0.208			0.003	n	n	н	В	п
Thallium	U			0.0600	"	n .	9	"	"
Tin	U			0.0200	"	n	n	"	n n
Titanium	0.0516			0.006	"	n .	9	19	
Vanadium	0.0118			0.005	"	n n	II .	II.	11
Zinc	0.314			0.0300	n	п	н	н	В



Chicago Regional Laboratory

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Water Division, WECA Region 5
Project: Central Sands

77 West Jackson Boulevard
Project Number: CB022018
Chicago IL, 60604
Project Manager: Cheryl Burdett

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

FB2 (1805005-32)	Matrix: Water	Samp	pled: May	ed: May-01-18 07:39		Received: May-02-18 09:55			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	U			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Antimony	U			0.0200	"	н	11	0	n
Arsenic	U			0.0400	"	"	H	11	"
Barium	U			0.003	"	H .	H.	H	11
Beryllium	U			0.002	n	"	и	II.	n .
Boron	U			0.0500	"	II II	n	"	"
Cadmium	U			0.002	н	н	н	D	11
Calcium	U			0.200	н	H	н	19	15
Chromium	U			0.005	n	n	И	ij.	и
Cobalt	U			0.006	н	H	H	B	11
Copper	U			0.0200	п	н	н	n.	n .
Iron	U			0.0800	п	н	н	IJ	п
Lead	U			0.0300	n	н	В	В	В
Lithium	U			0.0250	n	н	В	И	и
Magnesium	${f U}$			0.200	n	11	н	11	"
Manganese	U			0.008	п	н	н	n	n
Molybdenum	U			0.0120	п	н	н	Ŋ	11
Nickel	U			0.0120	n	н	н	В	May-14-18
Potassium	U			0.800	п	п	н	11	May-09-18
Selenium	U			0.0500	п	n	н	II.	11
Silver	U			0.0100	п	н	н	D	n
Sodium	U			0.400	"	11	n.	11	11
Strontium	U			0.003	n	п	И	В	В
Thallium	U			0.0600	n	н	В	II	"
Tin	U			0.0200	В	н	И	n .	"
Titanium	U			0.006	"	н	и	15	В
Vanadium	U			0.005	n n	н	U	II .	н
Zinc	U			0.0300	n			н	II .

Report Name: 1805005 Metals ICP-AES (w) FINAL May 29 18 1055

Reported:

May-29-18 10:55



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5Project:Central Sands77 West Jackson BoulevardProject Number:CB022018Reported:Chicago IL, 60604Project Manager:Cheryl BurdettMay-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C7 equip (1805005-33)	Matrix	Matrix: Water		Sampled: May-01-18 07:38			Received: May-02-18 09:55			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	
Aluminum	U			0.200	mg/L	1	B18E014	May-08-18	May-09-18	
Antimony	U			0.0200	н	п	IJ	n	"	
Arsenic	U			0.0400	n	n	H	15	16	
Barium	U			0.003	n	n	II .	II	II .	
Beryllium	U			0.002	н	n	H	ij	H.	
Boron	U			0.0500	н	п	11	"	"	
Cadmium	U			0.002	н	п	11	n	"	
Calcium	U			0.200	"	"	,,	IJ	"	
Chromium	U			0.005	n	п	"	ij	"	
Cobalt	U			0.006	"	"	11	H	"	
Copper	U			0.0200	H	н	11	W.	"	
Iron	U			0.0800	п	н	n	n	"	
Lead	U			0.0300	n	п	H	H	В	
Lithium	U			0.0250	n	п	IJ	H	II.	
Magnesium	U			0.200	11	Ħ	11	li li	"	
Manganese	U			0.008	п	п	n	9	n	
Molybdenum	U			0.0120	"	н	ij	11	i)	
Nickel	U			0.0120	"	н	H	Ħ	May-14-18	
Potassium	U			0.800	n	н	n	W.	May-09-18	
Selenium	U			0.0500	"	н	n	"	"	
Silver	U			0.0100	n	н	ıı	Ü	n	
Sodium	U			0.400	"	п	IJ	Ħ	11	
Strontium	U			0.003	n	n	N	Ħ	II.	
Thallium	U			0.0600	"	H	h	"	"	
Tin	U			0.0200	"	н	11	"	"	
Titanium	U			0.006	n	н	н	11	В	
Vanadium	U			0.005	n	н	IJ	И	И	
Zinc	U			0.0300	n	п	N	В	В	



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands 77 West Jackson Boulevard Project Number: CB022018 Project Manager: Cheryl Burdett Chicago IL, 60604

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) **US EPA Region 5 Chicago Regional Laboratory**

C7b Dup (1805005-34) Matrix: Water Sampled: May-01-18 08:02 Received: May-02-18 09:55

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	5.41			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Antimony	U			0.0200	II .	н	u	"	"
Arsenic	U			0.0400	"	"	n	"	"
Barium	0.210			0.003	"	"	"	"	"
Beryllium	U			0.002	н	н	н	"	n
Boron	0.0946			0.0500	н	н	n	"	"
Cadmium	U			0.002	н	н	n	0	n
Calcium	58.3	L		0.200	"	n .	9	"	15
Chromium	0.200			0.005	п	п	n .	II	п
Cobalt	0.0201			0.006	н	н	н	"	n
Copper	0.0859			0.0200	н	н	n	"	"
Iron	24.0			0.0800	н	н	n	IJ	n
Lead	U			0.0300	n	п	H	15	В
Lithium	U			0.0250	п	n	H.	"	"
Magnesium	26.4			0.200	н	H	n	"	"
Manganese	7.64			0.008	н	н	n	n	n
Molybdenum	0.0126			0.0120	n	!!	n	"	"
Nickel	0.0506			0.0120	n	n .	H	11	May-14-18
Potassium	19.5			0.800	н	"	п	"	May-09-18
Selenium	\mathbf{U}			0.0500	н	н	n	"	"
Silver	\mathbf{U}			0.0100	н	н	и	n	n
Sodium	11.9			0.400	"	"	11	"	"
Strontium	0.148			0.003	n	n	н	II.	II.
Thallium	U			0.0600	n n	n	и	"	"
Tin	U			0.0200	п	n	п	II.	"
Titanium	0.0357			0.006	n	н	н	II .	и
Vanadium	0.0073			0.005	n	н	И	II .	и
Zinc	0.0555			0.0300	n	п	н	И	В



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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C8a (1805005-35)	Matrix: Water		Sampled: May-01-18 08:35		Received: May-02-18 09:55				
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	10.3			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Antimony	U			0.0200	н	н	ıı	IJ	D
Arsenic	U			0.0400	n	,,	ii	15	15
Barium	0.599			0.003	n	"	II .	II	II .
Beryllium	0.0027			0.002	н	н	n	ij	n .
Boron	U			0.0500	п	H	"	"	"
Cadmium	U			0.002	п	н	IJ	n	"
Calcium	36.5	L		0.200	n	H	n	IJ	"
Chromium	0.110			0.005	n	ii	IJ	ij	"
Cobalt	0.0240			0.006	n	H	h	ii	!!
Copper	0.139			0.0200	н	н	n	W.	11
Iron	18.9			0.0800	п	н	n	n	"
Lead	U			0.0300	п	n .	n	н	В
Lithium	U			0.0250	п	n	IJ	H	II.
Magnesium	12.6			0.200	н	N	li li	li li	"
Manganese	12.2			0.008	п	н	n	9	n
Molybdenum	U			0.0120	н	H	n	,	"
Nickel	0.0538			0.0120	п	II .	n	н	May-14-18
Potassium	5.35			0.800	п	n	р	W .	May-09-18
Selenium	U			0.0500	н	H	n	W .	"
Silver	U			0.0100	п	н	13	n	n
Sodium	6.22			0.400	"	n n	II .	H H	"
Strontium	0.177			0.003	n	n	H	Ħ	II.
Thallium	U			0.0600	n	n	р	n .	"
Tin	U			0.0200	н	Ħ	IJ	"	"
Titanium	0.0436			0.006	п	n	и	11	В
Vanadium	0.0162			0.005	"	II .	IJ	И	И
Zinc	0.0555			0.0300	п	п	II .	И	II.



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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Antimony U 0,000	C8b (1805005-36)	Matrix: Water	· Samj	ampled: May-01-18 08:42		Received: May-02-18 09:55				
Antimony U 0,000	Analyte	Result		MDL		Units	Dilution	Batch	Prepared	Analyzed
Arsenic U 0,0400	Aluminum	13.7			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Barium 0,395 0,003	Antimony	U			0.0200	"	н	n	D	n
Baryllim	Arsenic	U			0.0400	n .	H	Ŋ	, , , , , , , , , , , , , , , , , , ,	
Boron	Barium	0.395			0.003	"	"	II .	"	"
Cadmium U 0.0020 " <t< td=""><td>Beryllium</td><td>U</td><td></td><td></td><td>0.002</td><td>n</td><td>"</td><td>h</td><td>"</td><td>"</td></t<>	Beryllium	U			0.002	n	"	h	"	"
Calcium 11.5 L 0.200 " " " " " " " " " " " " " " " " " "	Boron	U			0.0500	n n	"	n	"	"
Chromium 0.208 0.005 """"""""""""""""""""""""""""""""""""	Cadmium	U			0.002	н	н	и	n	n
Cobalt 0.0218 0.006 "	Calcium	11.5	L		0.200	и	H	В	, , , , , , , , , , , , , , , , , , ,	
Copper 0.0715 0.0200 "	Chromium	0.208			0.005	п	n	И	IJ	n.
Tron	Cobalt	0.0218			0.006	п	H	В	ıı	n
Lead U 0.0300 " " " " " " " " " " " " " " " " " "	Copper	0.0715			0.0200	н	н	п	II .	"
Lithium U 0.0250 " <t< td=""><td>Iron</td><td>24.4</td><td></td><td></td><td>0.0800</td><td>п</td><td>н</td><td>IJ</td><td>IJ</td><td>n</td></t<>	Iron	24.4			0.0800	п	н	IJ	IJ	n
Magnesium 4.02 0.200 "	Lead	U			0.0300	п	H	В	В	В
Manganese 3.74 0.008 " " " " " " " " " " " " " " " " " "	Lithium	U			0.0250	п	п	В	n	n
Molybdenum U 0.0120 " " " " " " " " " " " " May-14-18 Nickel 0.0340 0.0120 " " " " May-14-18 Potassium 5.28 0.800 " " " " May-09-18 Selenium U 0.0500 " <td>Magnesium</td> <td>4.02</td> <td></td> <td></td> <td>0.200</td> <td>В</td> <td>ři</td> <td>В</td> <td>"</td> <td>"</td>	Magnesium	4.02			0.200	В	ři	В	"	"
Nickel 0.0340 0.0120 " " " May-14-18 Potassium 5.28 0.800 " " " May-09-18 Selenium U 0.0500 "	Manganese	3.74			0.008	п	н	и	D	n
Nicket 0.9340 0.0120 May-14-16 Potassium 5.28 0.800 " " " May-09-18 Selenium U 0.0500 " " " " " " Silver U 0.0100 " <t< td=""><td>Molybdenum</td><td>U</td><td></td><td></td><td>0.0120</td><td>п</td><td>н</td><td>B</td><td>IJ</td><td>D D</td></t<>	Molybdenum	U			0.0120	п	н	B	IJ	D D
Selenium U 0.0500 " <	Nickel	0.0340			0.0120	п	ii	В	В	May-14-18
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>5.28</td><td></td><td></td><td>0.800</td><td>п</td><td>Ħ</td><td>В</td><td>II .</td><td>May-09-18</td></th<>	Potassium	5.28			0.800	п	Ħ	В	II .	May-09-18
Sodium 2.24 0.400 " <	Selenium	U			0.0500	н	H	н	II .	"
Strontium 0.6638 0.003 "	Silver	U			0.0100	н	н	п	D	D
Thallium U 0.0600 " <	Sodium	2.24			0.400	"	"	11	"	"
Tin U 0.0200 "<	Strontium	0.0638			0.003	n	n	И	н	В
Titanium 0.0446 0.006 "	Thallium	U			0.0600	11	H	В	"	"
Vanadium 0.0125 0.005 " " " " "	Tin	U			0.0200	н	н	В	II	II .
vanadum v.0123 0.005	Titanium	0.0446			0.006	"	н	В	И	15
Zinc 0.0880 0.0300 " " " "	Vanadium	0.0125			0.005	"	п	В	IJ	И
	Zinc	0.0880			0.0300	n	n	н	II .	II.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Analyte Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium Magnesium	Result	Flags / Qualifiers	MDL	Reporting					
Antimony Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium	10.9		MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium				0.200	mg/L	l	B18E014	May-08-18	May-09-18
Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium	U			0.0200	п	н	IJ	0	n
Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium	U			0.0400	п	н	19	19	11
Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium	0.481			0.003	n	"	II.	II .	11
Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium	U			0.002	н	н	n	B.	11
Calcium Chromium Cobalt Copper Iron Lead Lithium	U			0.0500	п	н	11	"	"
Chromium Cobalt Copper Iron Lead Lithium	U			0.002	п	н	n	D	0
Cobalt Copper Iron Lead Lithium	16.1			0.200	n .	н	н	19	15
Copper Iron Lead Lithium	0.696			0.005	п	н	И	И	n
Iron Lead Lithium	0.0400			0.006	н	н	н	II	n.
Iron Lead Lithium	0.479			0.0200	"	н	n	"	"
Lithium	73.1			0.0800	п	н	n	IJ	II .
	U			0.0300	n n	н	н	В	н
Magnesium	U			0.0250	n	п	II.	II .	"
	4.78			0.200	н	н	n	11	"
Manganese	3.45			0.008	п	н	и	0	D
Molybdenum	U			0.0120	"	п	n	"	"
Nickel	0.181			0.0120	"	"	н	11	May-14-18
Potassium	10.9			0.800	n n	н	и	II .	May-09-18
Selenium	U			0.0500	"	н	n	"	"
Silver	U			0.0100	n	н	n	n	n
Sodium	3.34			0.400	"	"	, , , , , , , , , , , , , , , , , , ,	"	"
Strontium	0.234			0.003	n	n	H	и	II.
Thallium	U			0.0600	"	"	9	"	"
Tin	U			0.0200	n n	н	n	"	"
Titanium	0.0370			0.006	n	н	H		11
Vanadium	0.0073			0.005	"	"	II.	"	II .
Zinc	1.29			0.0300	n	n	H	II .	в



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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C9b (1805005-38)			Sampled: May-01-18 10:21			Received: May-02-18 09:55			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	13.3			0.200	mg/L	1	B18E014	May-08-18	May-09-18
Antimony	U			0.0200	п	н	11	0	n
Arsenic	U			0.0400	п	!!	Ŋ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	#
Barium	0.337			0.003	п	H .	H.	H	н
Beryllium	U			0.002	"	"	и	II.	n
Boron	U			0.0500	п	II II	n	"	"
Cadmium	U			0.002	н	н	н	D	n
Calcium	3.82			0.200	n	н	н	Ŋ	15
Chromium	0.0354			0.005	n	n	И	и	н
Cobalt	0.0223			0.006	н	н	н	В	п
Copper	0.0464			0.0200	п	н	п	n	п
Iron	10.6			0.0800	n	н	и	n	В
Lead	U			0.0300	n	н	В	В	В
Lithium	U			0.0250	n	н	н	В	н
Magnesium	1.19			0.200	н	н	В	II	n
Manganese	2.11			0.008	п	н	и	n	D
Molybdenum	U			0.0120	n	н	и	n	В
Nickel	0.0262			0.0120	n n	н	н	В	May-14-18
Potassium	4.43			0.800	п	н	В	II .	May-09-18
Selenium	U			0.0500	н	н	п	II .	п
Silver	U			0.0100	п	н	и	n	D
Sodium	1.23			0.400	"	n .	II .	II .	II
Strontium	0.0294			0.003	n	п	н	В	н
Thallium	U			0.0600	n	н	В	II .	n
Tin	U			0.0200	н	н	п	n .	п
Titanium	0.112			0.006	"	н	н	15	В
Vanadium	0.0341			0.005	"	n	U	И	н
Zinc	U			0.0300	n	n	н	II.	н



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Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Antimony U 0,0000 ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	C10a (1805005-39)	Matrix: Water	San	pled: Mag	y-01-18 11:05	Rec	eived: May-0	2-18 09:55		
Artimony U 0,0000 * ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	Analyte	Result		MDL		Units	Dilution	Batch	Prepared	Analyzed
Arsenice U 0,04000 " 0,0500 "	Aluminum	2.47			0.200	mg/L	l	B18E014	May-08-18	May-09-18
Barium	Antimony	U			0.0200	п	н	II.	n	n
Beryllium U 0,002 " " " " " " " " " " " " " " " " " "	Arsenic	U			0.0400	"	"	11	II	11
Service Serv	Barium	0.302			0.003	"	"	"	W .	II .
Cadmium U 0.0020 ' ' ' ' Cadeium 100 0.200 ' ' ' ' ' Chronium 0.0219 0.005 '	Beryllium	U			0.002	n	"	n .	"	n
Calcium 100 0.2020 0.005 0.006 CObalt 0.001 0.006 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.000000	Boron	U			0.0500	H .	II II		"	n.
Chromium 0.0219 0.005 "	Cadmium	U			0.002	п	н	13	n	n
Chromium 0.0211 0.006 "	Calcium	100			0.200	11	н	н	11	15
Copper 0.0692 0.0200 "	Chromium	0.0219			0.005	n	n	IJ	ij	н
Part	Cobalt	0.0201			0.006	н	н	Ŋ	ıı	В
Lead	Copper	0.0692			0.0200	н	н	n	"	n
Lithium U 0.0250 " <t< td=""><td>Iron</td><td>9.52</td><td></td><td></td><td>0.0800</td><td>н</td><td>н</td><td>и</td><td>IJ</td><td>В</td></t<>	Iron	9.52			0.0800	н	н	и	IJ	В
Magnesium hi 54.3 0.200 "	Lead	U			0.0300	н	н	Н	В	В
Manganese 3.18 0.008 " May-14-18 May-14-18 Potassium 1.08 0.002 " " " " May-14-18 Potassium 1.0 " " " May-14-18 Potassium 1.0 " " " " May-09-18 Selenium 1.0 " <td>Lithium</td> <td>U</td> <td></td> <td></td> <td>0.0250</td> <td>п</td> <td>н</td> <td>И</td> <td>IJ</td> <td>В</td>	Lithium	U			0.0250	п	н	И	IJ	В
Molybdenum U 0.0120 " " " " May-14-18 Nickel 0.0332 0.0120 " " " May-14-18 Potassium 1.98 0.800 " " " " May-09-18 Selenium U 0.0500 " " " " " " " " " " " " " " " " " " " May-14-18 Potassium 1.98 0.800 " " " May-09-18 Selenium U 0.0500 "	Magnesium hi	54.3			0.200	11	н	13	"	II
Nickel 0.0332 0.0120 " " " " May-14-18 Potassium 1.98 0.800 " " " " May-09-18 Selenium U 0.0500 "	Manganese	3.18			0.008	н	н	и	D	D
Potassium 1.98 0.800 " " " " May-09-18 Selenium U 0.0500 "	Molybdenum	${f U}$			0.0120	н	н	ij	IJ	В
Selenium U 0.0500 " <	Nickel	0.0332			0.0120	н	н	Н	В	May-14-18
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>1.98</td><td></td><td></td><td>0.800</td><td>н</td><td>н</td><td>я</td><td>"</td><td>May-09-18</td></th<>	Potassium	1.98			0.800	н	н	я	"	May-09-18
Sodium 2.57 0.400 " <	Selenium	U			0.0500	н	н	n	II .	n
Strontium 0.123 0.003 "	Silver	U			0.0100	н	н	n	D	D
Thallium U 0.0600 " <	Sodium	2.57			0.400	"	n .	IJ	"	п
Tin U 0.0200 "<	Strontium	0.123			0.003	n	п	H	II .	п
Titanium 0.0246 0.006 "	Thallium	U			0.0600	н	н	Ŋ	"	n n
Vanadium 0.0100 0.005 " " " " " "	Tin	U			0.0200	н	н	n	ıı .	п
vanadum 0.0100 0.000	Titanium	0.0246			0.006	n	н	В	15	В
Zinc U 0.0300 " " " "	Vanadium	0.0100			0.005	n	n	U	II .	п
	Zinc	U			0.0300	n	n	11	В	В



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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Analyte Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Chromium Chromium Cobalt Copper Iron Lead Lithium	Result	Flags /							
Antimony Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium		Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium	14.1			0.200	mg/L	l	B18E014	May-08-18	May-09-18
Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium	U			0.0200	"	н	11	n	0
Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium	U			0.0400	и	н	н	19	
Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium	0.599			0.003	"	"	U	11	"
Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium	U			0.002	11	н	0	н	11
Calcium Chromium Cobalt Copper Iron Lead Lithium	U			0.0500	н	н	1)	"	"
Chromium Cobalt Copper Iron Lead Lithium	U			0.002	н	н	IJ	D	n
Cobalt Copper Iron Lead Lithium	60.0			0.200	п	н	н	15	11
Copper Iron Lead Lithium	0.464			0.005	п	н	Ŋ	В	п
Iron Lead Lithium	0.0364			0.006	n	н	И	и	n
Iron Lead Lithium	0.294			0.0200	п	н	II .	n n	n
Lithium	83.8			0.0800	п	н	IJ	9	n
	U			0.0300	n	н	н	В	В
*	U			0.0250	n	п	"	И	п
Magnesium	22.1			0.200	н	н	IJ	"	"
Manganese	3.84			0.008	п	н	IJ	n	n
Molybdenum	0.0234			0.0120	п	п	ıı	11	"
Nickel	0.141			0.0120	"	"	н	В	May-14-18
Potassium	7.81			0.800	n	н	и	II .	May-09-18
Selenium	U			0.0500	n	н	IJ	n	n
Silver	U			0.0100	n	н	IJ	n	n
Sodium	5.22			0.400	"	n	II .	11	"
Strontium	0.387			0.003	n	п	11	В	н
Thallium	U			0.0600	"	11	11	"	"
Tin	U			0.0200	n	н	n	n	n
Titanium	0.0550			0.006	"	н	н	11	11
Vanadium	0.0275			0.005	"	"	"	II .	"
Zinc	0.144			0.0300	n	n	11	н	п



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77 West Jackson Boulevard Project Number: CB022018
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Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C11a (1805005-41)	Matrix: Water		Sampled: May-01-18 11:46			eived: May-0			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	3.67			0.200	mg/L	1	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	н	н	IJ	D	n
Arsenic	U			0.0400	n.	"	n	"	11
Barium	0.171			0.003	n	n	II.	II .	н
Beryllium	U			0.002	н	H	n		п
Boron	U			0.0500	H	II II	1)	"	"
Cadmium	U			0.002	н	н	IJ	0	n
Calcium	65.4			0.200	11	H	н	19	15
Chromium	0.0675			0.005	n	n	II	ij.	н
Cobalt	0.0081			0.006	н	н	Ŋ	li .	п
Copper	0.113	K		0.0200	н	н	п	II .	п
Iron	40.2			0.0800	н	ii	и	IJ	В
Lead	U			0.0300	н	H	н	В	В
Lithium	U			0.0250	п	n	И	II	н
Magnesium	33.7			0.200	н	H	n	II	n
Manganese	1.58			0.008	н	н	и	D	D
Molybdenum	U			0.0120	н	н	и	IJ	В
Nickel	0.0308			0.0120	н	n .	н	И	May-14-18
Potassium	2.07			0.800	н	н	н	II .	May-09-18
Selenium	U			0.0500	н	н	n	ij.	п
Silver	U			0.0100	н	н	и	D	D
Sodium	2.65			0.400	n	"	II .	II .	н
Strontium	0.0575			0.003	n	n	И	И	п
Thallium	U			0.0600	п	"	н	"	n
Tin	U			0.0200	н	н	n	"	n
Titanium	0.0293			0.006	n	n	и	li .	В
Vanadium	0.0284			0.005	n	"	n .	II .	н
Zinc	U			0.0300	"	n	н	н	н



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Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C11b (1805005-42)	Matrix: Water		Sampled: May-01-18 11:52		Received: May-02-18 09:55				
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	10.7			0.200	mg/L	1	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	н	н	II	D	1)
Arsenic	U			0.0400	н	H	н	11	"
Barium	0.416			0.003	n	n .	II	II	"
Beryllium	U			0.002	н	н	н	H	II
Boron	U			0.0500	н	H	11	"	"
Cadmium	U			0.002	н	H	II	0	"
Calcium	35.1			0.200	"	"	l)	"	"
Chromium	0.288			0.005	n	n	"	II	11
Cobalt	0.0290			0.006	11	H	h	H	li .
Copper	0.222			0.0200	н	н	n	"	"
Iron	61.7			0.0800	п	н	II .	"	"
Lead	U			0.0300	n	H	H	II .	в
Lithium	U			0.0250	n	n	Ħ	IJ.	II .
Magnesium	13.8			0.200	n	H	17	"	"
Manganese	2.35			0.008	п	н	H	n	n
Molybdenum	0.0206			0.0120	н	Ħ	11	IJ	11
Nickel	0.0876			0.0120	n .	Ħ	H	B	May-14-18
Potassium	5.58			0.800	n	Ħ	н	II .	May-09-18
Selenium	U			0.0500	п	H	H	II .	II.
Silver	U			0.0100	п	н	Ħ	n	n
Sodium	3.48			0.400	"	"	li .	"	"
Strontium	0.124			0.003	n	n	H	н	н
Thallium	U			0.0600	н	H	H	"	"
Tin	U			0.0200	п	Ħ	n	II .	"
Titanium	0.0300			0.006	н	н	н	II .	11
Vanadium	0.0355			0.005	п	п	H	II .	И
Zinc	0.0730			0.0300	n	n	II.	II .	н



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Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C12a (1805005-43)	Matrix: Water		Sampled: May-01-18 12:41		Received: May-02-18 09:55				
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Unîts	Dilution	Batch	Prepared	Analyzed
Aluminum	5.50			0.200	mg/L	l	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	п	н	II.	1)	n
Arsenic	U			0.0400	"	"	11	"	11
Barium	1.34			0.003	"	"	II.	11	н
Beryllium	0.0041			0.002	n	"	n .	"	п
Boron	U			0.0500	н	!!	1)	"	"
Cadmium	0.0025			0.002	п	н	11	0	n
Calcium	34.7			0.200	н	H	н	11	
Chromium	0.167			0.005	n	н	IJ	н	н
Cobalt	0.0221			0.006	н	н	Н	и	п
Copper	0.0775			0.0200	н	н	n	ıı	п
Iron	130			0.0800	н	н	и	В	В
Lead	0.0534			0.0300	н	н	Н	В	В
Lithium	U			0.0250	n	н	и	и	п
Magnesium	12.5			0.200	н	н	я	"	11
Manganese	1.83			0.008	н	н	и	n	D
Molybdenum	U			0.0120	н	н	IJ	IJ	В
Nickel	0.0958			0.0120	n	н	В	н	May-14-18
Potassium	3.08			0.800	n	н	9	"	May-09-18
Selenium	U			0.0500	н	н	n .	"	n
Silver	U			0.0100	п	н	11	n	n
Sodium	3.05			0.400	"	"		"	11
Strontium	0.190			0.003	n	n	H	н	н
Thallium	U			0.0600	n	n	10	"	"
Tin	U			0.0200	п	п	n	"	n.
Titanium	0.0180			0.006	n	n	н	19	11
Vanadium	0.155			0.005	n	n	U	И	н
Zinc	0.0566			0.0300	n	п	H	н	В



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

C12b (1805005-44)	Matrix: Wate	er San	ipled: Ma	y-01-18 12:47	Rec	eived: May-(02-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	5.05			0.200	mg/L	1	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	н	н	IJ	n	n
Arsenic	U			0.0400	"	n .	9	11	15
Barium	0.776			0.003	"	n	II.	II	11
Beryllium	U			0.002	"	n	II.	H	n .
Boron	U			0.0500	"	II II	1)	"	"
Cadmium	0.0045			0.002	n	H	11	n	D
Calcium	69.1			0.200	n .	H	Ŋ	15	
Chromium	0.325			0.005	n	n	H	II .	n
Cobalt	0.0146			0.006	H	H	þ	н	n
Copper	0.148			0.0200	н	н	n	II .	n.
Iron	154			0.0800	н	н	И	B	n
Lead	0.0304			0.0300	н	н	B	В	#
Lithium	U			0.0250	п	n	IJ	н	п
Magnesium	32.0			0.200	n	11	13	"	"
Manganese	12.8			0.008	п	н	n	n	0
Molybdenum	0.0479			0.0120	п	n n	ti ti	"	1)
Nickel	0.118			0.0120	п	n	H	15	May-14-18
Potassium	3.42			0.800	n	n	п	"	May-09-18
Selenium	U			0.0500	n	н	n	"	"
Silver	U			0.0100	п	н	11	n	n
Sodium	3.27			0.400	n	11	IJ	"	"
Strontium	0.110			0.003	n	n	H	н	#
Thallium	U			0.0600	n	n	ij	"	"
Tin	U			0.0200	п	н	и	11	n
Titanium	0.0504			0.006	n .	н	н	15	11
Vanadium	0.0726			0.005	"	н	U	И	н
Zinc	0.0396			0.0300	n	п	H	В	н



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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

	Matrix: Water		Sampled: May-01-18 13:30		Rec	eived: May-0			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	3.02			0.200	mg/L	l	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	n	н	11	n	0
Arsenic	U			0.0400	"	H H	p	19	
Barium	0.148			0.003	n .	H .	II.	11	11
Beryllium	U			0.002	п	H	n	н	11
Boron	U			0.0500	н	H	1)	"	"
Cadmium	U			0.002	н	н	n	D	n
Calcium	42.2			0.200	н	н	н	15	11
Chromium	0.0622			0.005	n	н	И	В	п
Cobalt	0.008			0.006	н	н	И	и	n
Copper	0.0784			0.0200	н	н	n	n n	n
Iron	43.4			0.0800	н	н	n	9	n
Lead	U			0.0300	n	н	н	В	В
Lithium	U			0.0250	n	п	II.	И	п
Magnesium	21.4			0.200	н	н	n	"	"
Manganese	0.887			0.008	н	н	n	D	n
Molybdenum	U			0.0120	n	н	n n	11	"
Nickel	0.0290			0.0120	n	н	н	В	May-14-18
Potassium	0.873			0.800	н	н	и	II .	May-09-18
Selenium	U			0.0500	n	н	n .	"	"
Silver	U			0.0100	н	н	n	n	"
Sodium	1.88			0.400	n	"	, , , , , , , , , , , , , , , , , , ,		"
Strontium	0.0637			0.003	n	n	II.	н	п
Thallium	U			0.0600	11	"	9	"	"
Tin	U			0.0200	п	н	n n	"	"
Titanium	0.0136			0.006	n .	н	IJ	11	11
Vanadium	0.0882			0.005	n	н	II.	11	"
Zinc	U			0.0300	n	п	И	В	н



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Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium Magnesium	uesult U U 0.742	Flags / Qualifiers	MDL	Reporting Limit 0.200	Units	Dilution	Batch	- ·	
Antimony Arsenic Barium 0 Beryllium 0 Boron Cadmium 0 Calcium Chromium 0 Cobalt 0 Copper 0 Iron Lead Lithium Magnesium	U U			0.200			Daten	Prepared	Analyzed
Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium Magnesium	U			0.200	mg/L	l	B18E015	May-08-18	May-09-18
Barium 6 Beryllium 0 Boron Cadmium 0 Calcium Chromium 6 Cobalt 0 Copper 6 Iron Lead Lithium Magnesium				0.0200	н	н	11	n	n
Beryllium 0. Boron Cadmium 0. Calcium Chromium 0. Cobalt 0. Copper 0. Iron Lead Lithium Magnesium	.742			0.0400	н	н	н	15	"
Boron Cadmium 0 Calcium Chromium 0 Cobalt 0 Copper 0 Iron Lead Lithium Magnesium				0.003	п	"	II.	11	11
Cadmium 0. Calcium Chromium 0. Cobalt 0. Copper 0. Iron Lead Lithium Magnesium	0029			0.002	п	н	н	II.	n.
Calcium Chromium Cobalt Copper Iron Lead Lithium Magnesium	U			0.0500	н	н	1)	"	"
Chromium Cobalt Copper Iron Lead Lithium Magnesium	0033			0.002	н	н	IJ	n	0
Cobalt 0. Copper construction Copper Construction Copper Construction Copper Co	23.0			0.200	п	н	н	15	15
Copper Iron Lead Lithium Magnesium	.474			0.005	п	н	Ŋ	н	n
Iron Lead Lithium Magnesium	0186			0.006	п	н	И	li .	"
Iron Lead Lithium Magnesium	.146			0.0200	п	н	II .	"	"
Lithium Magnesium	130			0.0800	п	н	IJ	9	n
Magnesium	U			0.0300	п	н	н	в	В
	U			0.0250	п	н	И	И	n .
Manganese	7.07			0.200	В	н	IJ	"	"
	1.08			0.008	п	н	IJ	9	0
Molybdenum 0.	0389			0.0120	п	п	ıı	"	"
Nickel	.149			0.0120	n	"	н	В	May-14-18
Potassium	6.50			0.800	п	н	и	"	May-09-18
Selenium	U			0.0500	п	н	n.	"	"
Silver	U			0.0100	п	н	II.	n	"
Sodium	3.91			0.400	"	"		"	"
Strontium	.101			0.003	n	n	11	В	II.
Thallium	U			0.0600	n	"	"	"	"
Tin	U			0.0200	n	н	n	"	"
Titanium 0	0307			0.006	"	н	н	11	"
Vanadium	.173			0.005	"	"	"	н	"
	.136			0.0300	n	n	Ħ	В	II.



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
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Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Analyte Flagst's MDL Reporting Limit Units Dibution Batch Prepared Analyzed Aluminum 4.14 0.200 mg/L 1 818E015 May-08-18 May-08-18 Antinony U 0.0200 " 1 818E015 May-08-18 May-08-18 Arsinch U 0.0200 " " " " " Bartin 0.191 0.0400 " " " " " Boron U 0.0500 " " " " " Chain 46.4 0.00500 " " " " " Chain 46.4 0.00500 " " " " " Chain 46.4 0.00500 " " " " " Chain 40.6 0.0050 " " " " " Chair 40.6 0.0050 " <th>D1a (1805005-47)</th> <th>Matrix: Water</th> <th>Sam</th> <th>pled: May-</th> <th>01-18 14:19</th> <th>Rece</th> <th>ived: May-02</th> <th>2-18 09:55</th> <th></th> <th></th>	D1a (1805005-47)	Matrix: Water	Sam	pled: May-	01-18 14:19	Rece	ived: May-02	2-18 09:55		
Antimony U 0.0000 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 <	Analyte	Result		MDL		Units	Dilution	Batch	Prepared	Analyzed
Assenic U 0,0400 '	Aluminum	4.14			0.200	mg/L	1	B18E015	May-08-18	May-09-18
Barium	Antimony	U			0.0200	"	H	n .	0	"
Beryllium	Arsenic	U			0.0400	п	H	Ŋ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	"
Servinda	Barium	0.191			0.003	"	II .	"	"	"
Cadmins U 0.0002 " <t< td=""><td>Beryllium</td><td>U</td><td></td><td></td><td>0.002</td><td>"</td><td>H</td><td>n</td><td>II.</td><td>"</td></t<>	Beryllium	U			0.002	"	H	n	II.	"
Calcium 46.4 0.200 "	Boron	U			0.0500	п	H	11	"	"
Chromium 0.106 0.005 "	Cadmium	U			0.002	н	н	IJ	n	n
Cobalt 0.0093 0.006 "	Calcium	46.4			0.200	п	H	ij	19	
Copper 0.153 0.0200 "	Chromium	0.106			0.005	n	n	IJ	ij.	n.
Part Part	Cobalt	0.0093			0.006	п	IJ	II	B	n
Hon 33.2 0.0300 " <th< td=""><td>Copper</td><td>0.153</td><td></td><td></td><td>0.0200</td><td>н</td><td>н</td><td>n</td><td>n.</td><td>n</td></th<>	Copper	0.153			0.0200	н	н	n	n.	n
Lithium U 0.0250 " <t< td=""><td>Iron</td><td>39.2</td><td></td><td></td><td>0.0800</td><td>n</td><td>Ħ</td><td>ij</td><td>IJ</td><td>0</td></t<>	Iron	39.2			0.0800	n	Ħ	ij	IJ	0
Magnesium 24.8 0.200 "	Lead	U			0.0300	n	ij	н	В	В
Manganese 1.98 0.008 " May-14-18 May-14-18 <td>Lithium</td> <td>U</td> <td></td> <td></td> <td>0.0250</td> <td>п</td> <td>н</td> <td>IJ</td> <td>И</td> <td>и</td>	Lithium	U			0.0250	п	н	IJ	И	и
Molybdenum U 0.0120 " " " " " " May-14-18 Nickel 0.0373 0.0120 " " " May-14-18 Potassium 1.66 0.800 " " " " May-09-18 Selenium U 0.0500 " May-09-18 Selenium U 0.0500 " <td>Magnesium</td> <td>24.8</td> <td></td> <td></td> <td>0.200</td> <td>н</td> <td>ij</td> <td>11</td> <td>17</td> <td>"</td>	Magnesium	24.8			0.200	н	ij	11	17	"
Nickel 0.0373 0.0120 " " " May-14-18 Potassium 1.66 0.800 " " " " May-09-18 Selenium U 0.0500 " " " " " " May-09-18 Silver U 0.0100 "	Manganese	1.98			0.008	п	н	ıı	D	n
Potassium 1.66 0.800 " " " " May-09-18 Selenium U 0.0500 "	Molybdenum	U			0.0120	п	И	ıı	19	n
Selenium U 0.0500 " <	Nickel	0.0373			0.0120	n	ij	н	В	May-14-18
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>1.66</td><td></td><td></td><td>0.800</td><td>n</td><td>Ħ</td><td>В</td><td>II</td><td>May-09-18</td></th<>	Potassium	1.66			0.800	n	Ħ	В	II	May-09-18
Sodium 2.04 0.400 " <	Selenium	U			0.0500	н	Й	n	II	ïi .
Strontium 0.0423 0.003 "	Silver	U			0.0100	п	Й	n	D	D
Thallium U 0.0600 " <	Sodium	2.04			0.400	"	"	n	II .	II .
Tin U 0.0200 " " " " " " " " " " " " Titanium 0.0904 0.006 " " " " " " " " " " " " " " " " " "	Strontium	0.0423			0.003	n	n	и	В	В
Titanium 0.0084 0.006 "	Thallium	U			0.0600	n	H	n	II .	"
Vanadium 0.0009 0.005 " " " " " " "	Tin	U			0.0200	н	И	n	II .	n .
vanadum 0.0909 0.000	Titanium	0.0084			0.006	"	H	н	15	16
Zinc U 0.0300 " " " " "	Vanadium	0.0909			0.005	"	"	"	И	"
	Zinc	U			0.0300	n	n	11	II.	п



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

D1b (1805005-48)	Matrix: Water	Samp	oled: May	-01-18 14:26	Rece	ived: May-02	2-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	7.09			0.200	mg/L	1	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	н	н	n	n	n
Arsenic	U			0.0400	"	"	n	15	15
Barium	0.397			0.003	"	"	"	II .	п
Beryllium	0.0023			0.002	н	n	n	II .	п
Boron	U			0.0500	"	II .	n	"	"
Cadmium	0.0027			0.002	n	II .	ıı	n	n
Calcium	19.8			0.200	"	"	n	IJ	"
Chromium	0.194			0.005	n	"	IJ	ij	II
Cobalt	0.0120			0.006	n	"	'n	H	n
Copper	0.110			0.0200	н	II .	n	II.	"
Iron	70.5			0.0800	n	n .	n	II .	п
Lead	U			0.0300	n	II .	11	и	н
Lithium	U			0.0250	п	n	11	ij	п
Magnesium	5.71			0.200	н	"	n	II	II
Manganese	0.646			0.008	н	n	n	n	n
Molybdenum	0.0185			0.0120	"	"	li .	"	11
Nickel	0.0763			0.0120	n	H	19	H	May-14-18
Potassium	4.45			0.800	"	11	р	II .	May-09-18
Selenium	U			0.0500	н	n	n	"	n .
Silver	U			0.0100	п	н	и	n	n
Sodium	2.60			0.400	"	"	"	II	"
Strontium	0.0908			0.003	n	n	И	II.	п
Thallium	U			0.0600	н	"	р	"	"
Tin	U			0.0200	п	n	n	"	n .
Titanium	0.0219			0.006	n	n .	и	H .	11
Vanadium	0.164			0.005	n	II .	II .	H	н
Zinc	0.0761			0.0300	n	n	II .	Ħ	н



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Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

Antimony U 0,000	D2a (1805005-49)	Matrix: Water	Samj	oled: May-	01-18 15:00	Rece	ived: May-02	2-18 09:55		
Antimony U 0,0000 " 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Analyte	Result		MDL		Units	Dilution	Batch	Prepared	Analyzed
Assention	Aluminum	3.32			0.200	mg/L	1	B18E015	May-08-18	May-09-18
Barium	Antimony	U			0.0200	н	н	н	Ð	n
Bervillium U 0.002	Arsenic	\mathbf{U}			0.0400	n .	H	Ŋ	19	
Boron U 0.0500	Barium	0.234			0.003	"	n	H	II .	11
Cadmium	Beryllium	U			0.002	п	H	и	B.	n .
Calcium 86.7 0.200 "	Boron	U			0.0500	н	н	н	"	"
Chromium 0.134 0.005 " " " " " " " " " " " Chomium 0.134 0.005 " " " " " " " " " " " " " " " " " "	Cadmium	U			0.002	н	н	н	0	0
Cobalt 0.0075 0.006 "	Calcium	86.7			0.200	п	H	н	19	15
Copper 0.101 0.0200 "	Chromium	0.134			0.005	п	n	И	ij	n .
Part Part	Cobalt	0.0075			0.006	п	H	И	ıı	n .
Iron 26.6 0.0800 " <t< td=""><td>Copper</td><td>0.101</td><td></td><td></td><td>0.0200</td><td>н</td><td>н</td><td>н</td><td>11</td><td>n</td></t<>	Copper	0.101			0.0200	н	н	н	11	n
Lithium U 0.0250 " " " " " " " " " " " " " " " " " " "	Iron	26.6			0.0800	п	ii	и	IJ	n
Magnesium hi 42.5 0.200 "	Lead	U			0.0300	п	H	В	В	В
Manganese 1.15 0.008 " May-14-18 M	Lithium	U			0.0250	п	п	В	и	n
Molybdenum U 0.0120 " " " " May-14-18 Nickel 0.0341 0.0120 " " " May-14-18 Potassium 9.87 0.800 " " " " May-09-18 Selenium U 0.0500 " May-14-18 Potassium 9.87 0.800 " " " May-09-18 Selenium U 0.0100 "	Magnesium hi	42.5			0.200	В	H	н	11	"
Nickel 0.0341 0.0120 " " " " May-14-18 Potassium 9.87 0.800 " " " " May-09-18 Selenium U 0.0500 "	Manganese	1.15			0.008	п	н	н	D	n
Potassium 9.87 0.800 " " " " May-09-18 Selenium U 0.0500 "	Molybdenum	U			0.0120	п	H	и	IJ	n
Selenium U 0.0500 " <	Nickel	0.0341			0.0120	п	ii	В	В	May-14-18
Silver U 0.0100 " <th< td=""><td>Potassium</td><td>9.87</td><td></td><td></td><td>0.800</td><td>п</td><td>n</td><td>н</td><td>II</td><td>May-09-18</td></th<>	Potassium	9.87			0.800	п	n	н	II	May-09-18
Sodium 5.14 0.400 " <	Selenium	U			0.0500	н	н	н	ij	n
Strontium 0.157 0.003 "	Silver	U			0.0100	н	Й	и	Ü	D
Thallium U 0.0600 " <	Sodium	5.14			0.400	"	"	В	II .	II .
Tin U 0.0200 "<	Strontium	0.157			0.003	n	n	И	И	II .
Titanium 0.0341 0.006 "	Thallium	U			0.0600	n	n	В	II .	"
Vanadium 0.0300 0.005 " " " " " " "	Tin	U			0.0200	п	н	И	II .	n
vanadum 0.000 0.000	Titanium	0.0341			0.006	"	н	н	15	15
Zinc U 0.0300 " " " " "	Vanadium	0.0300			0.005	"	n	п	II .	II .
	Zinc	U			0.0300	n	n	н	"	II.



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Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

D2b (1805005-50)	Matrix: Water	Samp	oled: May	-01-18 15:06	Rece	ived: May-02	2-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	8.45			0.200	mg/L	1	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	"	II .	n	0	"
Arsenic	U			0.0400	"	li .	n	"	"
Barium	0.154			0.003	"	II .	"	"	"
Beryllium	U			0.002	"	H	И	II.	n .
Boron	0.0669			0.0500	п	H	11	"	"
Cadmium	U			0.002	п	Ħ	13	D	0
Calcium	62.6			0.200	n .	II.	н	19	и
Chromium	0.233			0.005	n	n	И	н	и
Cobalt	0.0178			0.006	н	н	'n	и	и
Copper	0.119			0.0200	п	н	n	n.	"
Iron	31.2			0.0800	п	н	n	n	11
Lead	U			0.0300	n n	n	н	н	н
Lithium	U			0.0250	n	н	и	н	н
Magnesium	28.4			0.200	н	н	11	11	"
Manganese	0.697			0.008	п	И	ıı	n	n
Molybdenum	0.0209			0.0120	n	И	n	11	11
Nickel	0.0469			0.0120	n	II.	н	н	May-14-18
Potassium	19.6			0.800	п	н	В	II .	May-09-18
Selenium	U			0.0500	н	Й	n	II .	II .
Silver	U			0.0100	п	н	n	n	0
Sodium	11.2			0.400	"	"	n	11	И
Strontium	0.138			0.003	n	n	11	н	п
Thallium	U			0.0600	n	n n	и	"	"
Tin	U			0.0200	n	п	n	"	"
Titanium	0.0272			0.006	n	H .	н	11	11
Vanadium	0.0249			0.005	"	II .	II .	II.	"
Zinc	0.0482			0.0300	n	n	U	II.	п



(1005005 51)

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5Project: Central Sands77 West Jackson BoulevardProject Number: CB022018Chicago IL, 60604Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

D3a (1805005-51)	Matrix: Water	Samp	oled: May	-01-18 15:41	Rece	ived: May-02	2-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	8.42			0.200	mg/L	1	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	n n	H	11	n	"
Arsenic	U			0.0400	"	H	И	li	11
Barium	0.314			0.003	"	II .	ii	II .	"
Beryllium	U			0.002	n	H	IJ	II.	"
Boron	U			0.0500	n n	N	"	"	"
Cadmium	U			0.002	"	н	11	n	"
Calcium	56.3			0.200	n .	H	н	l)	"
Chromium	0.175			0.005	п	n	U	II.	n.
Cobalt	0.0358			0.006	н	Ħ	h	it.	ii
Copper	0.133			0.0200	н	Ħ	ij	n.	"
Iron	28.4			0.0800	п	n	n	n	0.
Lead	U			0.0300	п	n .	H	н	11
Lithium	U			0.0250	п	n	U	н	
Magnesium	8.38			0.200	п	N	IJ	"	"
Manganese	4.28			0.008	н	н	n	n	n
Molybdenum	U			0.0120	"	N	n	"	"
Nickel	0.0703			0.0120	"	H	H	II .	May-14-18
Potassium	3.44			0.800	11	п	n	II	May-09-18
Selenium	U			0.0500	11	н	n	II .	"
Silver	U			0.0100	п	н	п	n	11
Sodium	5.72			0.400	"	n n	11	II	"
Strontium	0.365			0.003	n	n	N	Ħ	11
Thallium	U			0.0600	11	"	p p	"	"
Tin	U			0.0200	п	n	n	II	"
Titanium	0.0161			0.006	"	H	н	II.	11
Vanadium	0.0198			0.005	n	II .	IJ	H	11
Zinc	U			0.0300	п	n	H	И	н



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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

D3b (1805005-52)	Matrix: Water	Samp	oled: May	-01-18 15:48	Rece	ived: May-02	2-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	11.3			0.200	mg/L	l	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	н	н	n	0	n
Arsenic	U			0.0400	n	,,	n	15	n
Barium	0.410			0.003	n	"	IJ	II	n
Beryllium	U			0.002	п	H	и	IJ	n
Boron	U			0.0500	н	н	n	11	"
Cadmium	U			0.002	н	н	n	0	n
Calcium	40.1			0.200	"	"	n	"	"
Chromium	0.232			0.005	n	н	IJ	II	n .
Cobalt	0.0332			0.006	"	ii	η	"	"
Copper	0.115			0.0200	"	H	n	"	"
Iron	32.4			0.0800	н	н	n	n	n
Lead	U			0.0300	n	H	11	11	н
Lithium	U			0.0250	n	n	11	"	n .
Magnesium	9.29			0.200	11	H	n	"	"
Manganese	1.06			0.008	11	н	n	n	n
Molybdenum	0.0148			0.0120	"	n	n	"	"
Nickel	0.0474			0.0120	n	H	11	11	May-14-18
Potassium	3.60			0.800	n	н	р	"	May-09-18
Selenium	U			0.0500	н	н	n	"	"
Silver	\mathbf{U}			0.0100	п	п	n	n	n
Sodium	4.14			0.400	"	"	n	"	"
Strontium	0.354			0.003	n	n	11	н	II.
Thallium	U			0.0600	п	n n	р	"	"
Tin	U			0.0200	н	н	n	II .	"
Titanium	0.0410			0.006	n	n	н	11	И
Vanadium	0.0352			0.005	"	n .	II .	"	II.
Zinc	0.0335			0.0300	n	n	11	II.	II.



Chicago Regional Laboratory

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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported: May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

D4a (1805005-53)	Matrix: Water		oled: May	-01-18 16:19	Rece	ived: May-02	2-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	3.45			0.200	mg/L	l	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	п	н	ıı	n	"
Arsenic	U			0.0400	n	,,	ij	15	15
Barium	0.161			0.003	n	"	"	H	II .
Beryllium	U			0.002	н	н	II.	H	n .
Boron	U			0.0500	п	H	II	"	"
Cadmium	U			0.002	п	н	ıı	n	n
Calcium	80.3			0.200	"	n .	ii	"	"
Chromium	0.131			0.005	п	н	II .	II	"
Cobalt	0.0074			0.006	n	H	II	H	"
Copper	0.0762			0.0200	н	н	1)	"	"
Iron	21.6			0.0800	п	н	n	II.	"
Lead	U			0.0300	n	H	H	II .	п
Lithium	U			0.0250	n	n	U	H.	п
Magnesium	34.7			0.200	п	H	IJ	"	"
Manganese	0.546			0.008	п	н	n	n	n
Molybdenum	0.0150			0.0120	п	N	n	"	"
Nickel	0.0387			0.0120	п	n .	H	н	May-14-18
Potassium	4.27			0.800	п	п	n	II	May-09-18
Selenium	U			0.0500	п	н	n	II .	"
Silver	U			0.0100	н	н	п	n	n
Sodium	4.35			0.400	"	n n	11	II	"
Strontium	0.419			0.003	n	n	N	Ħ	В
Thallium	U			0.0600	n	n	р	"	"
Tin	U			0.0200	п	Ħ	n	n.	"
Titanium	0.0140			0.006	n	н	и	н	15
Vanadium	U			0.005	"	n .	IJ	н	11
Zinc	U			0.0300	п	п	H	н	В



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Water Division, WECA Region 5 Project: Central Sands
77 West Jackson Boulevard Project Number: CB022018
Chicago IL, 60604 Project Manager: Cheryl Burdett

Reported:

May-29-18 10:55

Metals by ICP-AES using EPA 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

D4b (1805005-54)	Matrix: Water	Samp	oled: May	-01-18 16:26	Rece	ived: May-02	2-18 09:55		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Aluminum	15.3			0.200	mg/L	1	B18E015	May-08-18	May-09-18
Antimony	U			0.0200	n	H .	IJ	0	n
Arsenic	U			0.0400	"	"	"	11	11
Barium	0.266			0.003	"	"	"	"	н
Beryllium	U			0.002	n	"	n	II.	n
Boron	0.0722			0.0500	н	н	n	"	"
Cadmium	U			0.002	н	н	11	D	n
Calcium	80.6			0.200	"	н	н	Ŋ	15
Chromium	0.564			0.005	п	n	И	И	и
Cobalt	0.0372			0.006	n	н	11	В	п
Copper	0.216			0.0200	п	н	IJ	"	n n
Iron	75.8			0.0800	п	н	IJ	9	н
Lead	U			0.0300	n	н	H	н	В
Lithium	U			0.0250	n	н	II .	В	н
Magnesium	32.7			0.200	н	н	13	II	n
Manganese	3.49			0.008	п	н	n	n	D
Molybdenum	0.0308			0.0120	п	н	ıı	n	В
Nickel	0.102			0.0120	n	н	H	н	May-14-18
Potassium	30.5			0.800	н	n	В	II	May-09-18
Selenium	U			0.0500	н	н	n	II	n .
Silver	U			0.0100	н	Й	n	n	D
Sodium	16.6			0.400	"	"	n	II .	н
Strontium	0.229			0.003	n	n	и	В	В
Thallium	U			0.0600	"	n	n	II .	"
Tin	U			0.0200	п	н	n	n .	п
Titanium	0.0638			0.006	"	n	н	15	В
Vanadium	0.0329			0.005	"	"	"	И	н
Zinc	0.0484			0.0300	n	n	U	II.	н



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Water Division, WECA Region 5Project: Central Sands77 West Jackson BoulevardProject Number: CB022018Reported:Chicago IL, 60604Project Manager: Cheryl BurdettMay-29-18 10:55

Notes and Definitions

L	The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater
	than the reported value.

- K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- J The identification of the analyte is acceptable; the reported value is an estimate.

U Not Detected NR Not Reported

Q QC limit Exceeded